DVD-SH893M
DVD-SH895M
DVD-SH897M

DVD
user manual

imagine the possibilities

Thanks you for purchasing this Samsung product.
To receive a more complete service, please
register your product at
www.samsung.com/register

SAMSUNG

Line through writing

WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (OR BACK).

NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.	**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	This symbol indicates important instructions accompanying the product.

Do not install this equipment in a confined space such as a bookcase or similar unit.

WARNING : To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

CAUTION : HDD & DVD Recorder USES AN INVISIBLE LASER BEAM WHICH CAN CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE HDD & DVD Recorder CORRECTLY AS INSTRUCTED.

CAUTION

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

This product satisfies CE regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances, such as radios and televisions, use shielded cables and connectors for connections.

IMPORTANT NOTE

The mains lead on this equipment is supplied with a moulded plug incorporating a fuse. The value of the fuse is indicated on the pin face of the plug. If it requires replacing, a fuse approved to BS1362 of the same rating must be used.

Never use the plug with the fuse cover omitted if the cover is detachable. If a replacement fuse cover is required, it must be of the same colour as the pin face of the plug. Replacement covers are available from your dealer.

If the fitted plug is not suitable for the power points in your house or the cable is not long enough to reach a power point, you should obtain a suitable safety approved extension lead or consult your dealer for assistance.

However, if there is no alternative to cutting off the plug, remove the fuse and then safely dispose of the plug. Do not connect the plug to a mains jack, as there is a risk of shock hazard from the bared flexible cord.

To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.

The product unit accompanying this user manual is licenced under certain intellectual property rights of certain third parties. This licence is limited to private non-commercial use by end-user consumers for licenced contents.
No rights are granted for commercial use.
The licence does not cover any product unit other than this product unit and the licence does not extend to any unlicenced product unit or process conforming to ISO/IEC 11172-3 or ISO/IEC 13818-3 used or sold in combination with this product unit. The licence only covers the use of this product unit to encode and/or decode audio files conforming to the ISO/IEC 11172-3 or ISO/IEC 13818-3. No rights are granted under this licence for product features or functions that do not conform to the ISO/IEC 11172-3 or ISO/IEC 13818-3.

PRECAUTION

Important Safety Instructions

Read these operating instructions carefully before using the unit. Follow all the safety instructions listed below. Keep these operating instructions handy for future reference.

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding- type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, the point where they exit from the apparatus.
11) Only use attachments/accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Handling Cautions

- Before connecting other components to this HDD & DVD Recorder, be sure to turn them all off.
- Do not move the HDD & DVD Recorder while a disc is being played, or the disc may be scratched or broken, the HDD & DVD Recorder internal parts may be damaged.
- Do not put a flower vase filled with water or any small metal objects on the HDD & DVD Recorder.
- Be careful not to put your hand into the disc tray.
- Do not place anything other than the disc in the disc tray.
- Exterior interference such as lightning and static electricity can affect normal operation of this HDD & DVD Recorder. If this occurs, turn the HDD & DVD Recorder off and on again with the **STANDBY/ON** button, or disconnect and then reconnect the AC power cord to the AC power outlet. The HDD & DVD Recorder will operate normally.
- Be sure to remove the disc and turn off the HDD & DVD Recorder after use.
- Disconnect the AC power cord from the AC outlet when you don't intend to use the HDD & DVD Recorder for long periods of time.
- Clean the disc by wiping in a straight line from the inside to the outside of the disc.
- Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- The Mains plug is used as a disconnect device and shall stay readily operable at any time.

Line through writing

Maintenance of Cabinet

For safety reasons, be sure to disconnect the AC power cord from the AC outlet.

- Do not use benzene, thinner, or other solvents for cleaning.
- Wipe the cabinet with a soft cloth.

HDD (Hard Disk Drive)

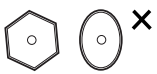
The hard disk has a high storage density, which enables long recording durations and quick access to written data. However, it can easily be damaged by shock, vibration or dust and should be kept away from magnets. To avoid losing important data, observe the following precautions.

- Do not use the HDD & DVD Recorder in a place subject to extreme changes in temperature.
- Do not apply a strong shock to the HDD & DVD Recorder.
- Do not place the HDD & DVD Recorder in a location subject to mechanical vibrations or in an unstable location.
- Do not place the HDD & DVD Recorder on top of a heat source.
- Do not disconnect the AC power cord while the power is on.
- Do not attempt to change the hard disk. This may result in a malfunction.

Should the hard disk be damaged, you cannot recover lost data. The hard disk is only a temporary storage space.

Disc Handling

- Use discs with regular shapes. If an irregular disc (a disc with a special shape) is used, this HDD & DVD Recorder may be damaged.



Holding discs

- Avoid touching the surface of a disc where recording is performed.

DVD-RAM, DVD±RW and DVD±R

- Clean with an optional DVD-RAM/PD disc cleaner (LF-K200DCA1 where available). Do not use cleaners or cloths for CDs to clean DVD-RAM/±RW/±R discs.

DVD-Video, Audio-CD

- Wipe off dirt or contamination on the disc with a soft cloth.

Cautions on handling discs

- Do not write on the printed side with a ball-point pen or pencil.
- Do not use record cleaning sprays or antistatic. Also, do not use volatile chemicals, such as benzene or thinner.
- Do not apply labels or stickers to discs. (Do not use discs fixed with exposed tape adhesive or leftover peeled-off stickers.)
- Do not use scratch-proof protectors or covers.
- Do not use discs printed with label printers available on the market.
- Do not load warped or cracked discs.

Disc Storage

Be careful not to harm the disc because the data on these discs is highly vulnerable to the environment.

- Do not keep under direct sunlight.
- Keep in a cool ventilated area.
- Store vertically.

- Keep in a clean protection jacket.
- If you move your HDD & DVD Recorder suddenly from a cold place to a warm place, condensation may generate on the operating parts and lens and cause abnormal disc playback. If this occurs, do not connect the plug to the power outlet and wait for two hours. Then insert the disc and try to play back again.

Disc Specifications

This unit allows you to record and playback high quality digital video on DVD-RAM/±RW/±R discs or on the HDD.
You can also edit digital images on DVD-RAM/±RW discs or HDD.

Disc Type

❖ DVD-Video

- A digital versatile disc (DVD) can contain up to 135-minutes of images, 8 audio languages and 32 subtitle languages. It is equipped with MPEG-2 picture compression and Dolby digital surrounding, allowing you to enjoy vivid and clear theatre quality images in the comfort of your own home.
- When switching from the first layer to the second layer of a dual-layered DVD Video disc, there may be momentary distortion in the image and sound. This is not a malfunction of the unit.
- Once a DVD-RW/±R recorded in Video Mode is finalised, it becomes DVD-Video.

❖ Audio CD

- An audio disc on which 44.1 kHz PCM Audio is recorded.
- Plays CD-DA format audio CD-R and CD-RW discs.
- The unit may not be able to play some CD-R or CD-RW discs due to the condition of the recording.

❖ CD-R/-RW

- Use a 700MB (80 minutes) CD-R/-RW disc. If possible, do not use a 800MB (90 minutes) or above disc, as the disc may not play back.
- If the CD-R/-RW disc was not recorded as a closed session, you may experience a delay in the early playback time, all recorded files may not play.
- Some CD-R/-RW discs may not be playable with this unit, depending on the device which was used to burn them. For contents recorded on CD-R/-RW media from CDs for your personal use, playability may vary depending on contents and discs.

❖ DVD±R Disc Playback and Recording

- Once a DVD±R recorded in Video Mode is finalised, it becomes DVD-Video.
- You can record onto the available space on the disc and perform editing functions such as giving titles to discs and programmes and erasing programmes before finalising.
- When programming is erased from a DVD±R, that space does not become available. Once an area on a DVD±R is recorded on, that area is no longer available for recording, whether the recording is erased or not.
- It takes about 30 seconds for the unit to complete recording management information after recording finishes.
- This product optimizes the DVD±R for each recording. Optimizing is carried out when you start recording after inserting the disc or turning on the unit. Recording onto the disc may become impossible if optimizing is carried out too many times.
- Playback may be impossible in some cases due to the condition of recording.
- This unit can play back DVD±R discs recorded and finalised with a Samsung DVD video recorder. It may not be able to play some DVD±R discs depending on the disc and the condition of the recording.

❖ DVD-RW Disc Playback and Recording

- Recording and playback can be performed on DVD-RW discs in both the Video and VR Modes.
- Once a DVD-RW recorded in both the Video and VR Modes is finalised, you cannot perform additional recording.
- Once a DVD-RW recorded in Video Mode is finalised, it becomes DVD-Video.
- In both modes, playback can be performed before and after finalisation, but additional recording, deleting and editing can not be performed after finalisation.

Line through writing

- If you want to record the disc in VR Mode and then record in V Mode, be sure to execute Format. Be careful when executing Format because all the recorded data may be lost.
- A DVD-RW blank disc is initialised to VR Mode when first initialised.

❖ DVD+RW Disc Playback and Recording

- With DVD+RW discs, there is no difference between DVD-Video format(Video mode) and DVD-Video Recording format(VR mode).
- Finalising is generally unnecessary when using a DVD+RW disc.

❖ DVD-RAM Disc Playback and Recording

- Ensure that the recording mode is set to VR mode. Otherwise, this product will not be able to play the recording.
- You cannot play a DVD-RAM in most DVD components due to compatibility issues.
- Only DVD-RAM standard Version 2.0. discs can be played in this unit.
- DVD-RAM recorded on this unit may not work with other DVD components. To determine compatibility with these DVD-RAM discs, refer to the user's manual for the player.
- For cartridge type DVD-RAM discs, remove the cartridge and use the disc only.

Disc Copy

Title Copy Specifications

Contents	HDD → DVD	DVD → HDD
Recorded Video Title	Supported	Supported
Copy Protected Title	Not supported	Not supported
Copy Once Title	Move (Deletes the Title in the HDD after copying)	Not supported

Once "Copy Once programme" has been recorded on the DVD disc, this title cannot be copied to HDD anymore.

But "Copy Once programme" has been recorded on the HDD, this title can be copied to DVD-RW (VR mode) with CPRM or DVD-RAM.

Contents Copy Specifications

Contents	HDD ➔ DVD or USB	DVD ➔ HDD or USB	USB ➔ HDD or DVD
MP3	Supported	Supported	Supported
JPEG(photo)	Supported	Supported	Supported
DivX	Supported	Supported	Supported
CD-DA	Not supported	Supported	Not supported

- Disc(CD-DA/CD-R/CD-RW/DVD-RAM, DVD±R(Finalise)/ DVD+RW/DVD-RW(Finalise)) ➔ HDD or USB
- HDD ➔ DVD-R, DVD-RW(V) or USB
- USB ➔ HDD or DVD-R, DVD-RW(V)
- PTP USB is not available when you copy to USB.
- If the disc is finalised through Disc Manager, it can be compatible with PC as a disc with a UDF file system.

COPY PROTECTION

- Many DVD discs are encoded with copy protection.
- This product incorporates copyright protection technology that is protected by methods claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorised by Macrovision Corporation, is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Protection

This HDD & DVD Recorder can allow you to protect the contents of your discs, as described below.

- Programme-protected : See page 85 “Locking (Protecting) a Title”
- Disc-protected : See page 100 “Disc Protection”

❋ DVD-RAM/±RW/±R discs that are incompatible with the DVD-VIDEO format cannot be played with this product.

❋ For more information on DVD recording compatibility, consult your DVD-RAM/±RW/±R manufacturer.

❋ Use of poor quality DVD-RAM/±RW/±R discs may cause following unexpected problems including, without limitation, recording failure, loss of recorded or edited materials or damage to the HDD & DVD Recorder.

Disc Format

❖ Using MP3 disc

- CD-R/-RW, DVD-RAM/±RW/±R, HDD, USB with MP3 files recorded with UDF, ISO9660 or JOLIET format can be playbacked.
- Only MP3 files with the “.mp3” or “.MP3” extension can be played.
- For MP3 files recorded with a VBR(Variable Bit Rates), from 32 Kbps to 320 Kbps, the sound may cut in and out.
- Playable bit-rate range is from 56 Kbps to 320 Kbps.
- Each folder can have up to 500 items including files and sub folders.

❖ Using JPEG disc

- CD-R/-RW, DVD-RAM/±RW/±R, HDD, USB recorded with UDF, ISO9660 or JOLIET format can be playbacked.
- Only JPEG files with the “.jpg” or “.JPG” extension can be displayed.
- Each folder can have up to 500 items including files and sub folders.
- MOTION JPEG and progressive JPEG are not supported.

❖ Using DivX disc

- Disc : CD-R/-RW, DVD-RAM/±RW/±R, HDD, USB
- Video File with following extensions can be played. : .avi, .divx, .AVI, .DIVX
- DivX Video (Codec) Format : DivX 3.11, DivX 4.x, DivX 5.x (without QPEL and GMC)
- DivX Audio (Codec) Format : MP3, MPEG1 Audio Layer 2, LPCM, AC3, DTS
- Supported subtitle file formats: .smi, .srt, .sub, .psb, .txt, .ass
- Each folder can have up to 500 items including files and sub folders.
- You cannot play back the disc that is larger than a 720 x 576 pixel resolution.

Line through writing

Do not use the following discs!

- LD, CD-G, CD-I, CD-ROM and DVD-ROM discs should not be used in this product.

  [Note]
  Disc types that can be played : CD/CD-R/-RW/MP3/JPEG/DVD-Video/DVD-RAM/±RW/±R.
  For a DVD-RW/±R disc, which has been recorded in Video Mode on another component, it can play only when finalised.
- Some commercial discs and DVD discs purchased outside your region may not be playable with this product. When these discs are played, either “No disc.” or “Please check the regional code of the disc.” will be displayed.
- If your DVD-RAM/±RW/±R discs is an illegal copy or is not in DVD video format, it may also not be playable.

❖ Disc compatibility

- Not all brands of discs will be compatible with this unit.

❖ Compatible USB Devices at host port

- The USB host port acts as the one of desktop or laptop computer.
  - ✻ This product is compatible with mass storage devices(removable storage devices) and PTP devices (such as digital still cameras)
- The USB host port provides USB2.0 connectivity and also backward compatibility with USB1.1 (USB1.0) devices.
- Supported devices at host port
  - ✻ Mass Storage Devices
    - Digital Still Camera
    - MP3 Player
    - Memory stick
    - Card Reader (One or Multi-slot Card Reader)
    - External Hard disk drive : Only supports FAT32 formatted HDD.
    - Others removable storage devices.
  - ✻ PTP (Picture Transfer Protocol) devices
    - Digital Still Camera (in PTP mode among USB connection modes)
- This product only supports FAT16/32 file system
- This product supports up to maximum 4 partitions
- Notice (Caution)
  - ✻ If you happen to use a bad quality USB cable, the USB device might not be recognized.
  - ✻ The compatibility with MP3 players is somewhat restricted.
    - This product can playback only mp3 format contents.
    - This product does not support the audio contents encrypted by DRM (Digital Right Management)
  - ✻ Either USB hub device or hub extension connectivity is not supported.
  - ✻ There are lots of kinds of USB devices.
    Some of the USB devices mentioned above might not be compatible with this product.

• Target Peripheral List (TPL)
Since this product is not a Windows XP but an embedded USB host system, naturally the supported USB devices cannot help being limited.
The USB host functionality and compatibility of this product have been proved with following items. (Except these items , we expect lots of other USB devices will work well with this product)

✻ DSC (Digital Still Camera)

Vendor	Brand
Samsung	VP-MS11, S800, Pro815, V20, V10, D60, UCA5
Sony	DSC-W50, DSC-R1, DSC-P150, DSC-P200
Canon	IXUS 60, IXUS 600, PowerShot A700, IXUS 700, A620, S80
Panasonic	DMC-FX01, DMC LX1S, DMC-FZ5
Nikon	Coolpix 7900, Coolpix-p3, Coolpix S2
Olympus	C-70 zoom, SP-700, FE5500, C-470Z
Fuji	Finepix-F700

✻ MP3 Player

Vendor	Brand
Samsung	YP-T8, YP-U2, YP-T9, YP-P2
i-river	H10, N11, T30, Mplayer

✻ Others

Product	Vendor	Brand
Card Reader	Unicon	UC-601R
PMP	Cowon	A2
Extermal HDD	DATAgram	DHC-350

▪ Among MP3 players in the list above, those that do not use Mass Storage Class are not supported.

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● LINE THROUGH WRITING

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GENERAL FEATURES

This unit allows you to record and playback high quality digital video on DVD-RAM/±RW/±R discs or on the HDD. You can also edit digital images on DVD-RAM/±RW discs or HDD.

HDD Recording

- DVD-SH893M

  You can record up to Approx. 264 hours of video (in EP 8 Hr mode) on the internal 160 GB (gigabyte) hard disk (HDD).
- DVD-SH895M

  You can record up to Approx. 421 hours of video (in EP 8 Hr mode) on the internal 250 GB (gigabyte) hard disk (HDD).
- DVD-SH897M

  You can record up to Approx. 534 hours of video (in EP 8Hr mode) on the internal 320 GB (gigabyte) hard disk (HDD).

With both recordable DVD and a high-capacity HDD in the same recorder, you have the flexibility to keep recordings on the HDD for quick access anytime, or record to DVD for archiving or playing on other DVD players. (See pages 69~72)

Copy between HDD and DVD

You can copy recordings from the HDD to recordable DVD, or from recordable DVD to the HDD.
You can only copy in the same record mode as source title. (See page 95)

Simultaneous Recording and Playback

Playback and recording for both the DVD and the built-in hard disk drive (HDD) are completely independent. For instance, While Recording to the HDD, play another title on the HDD or play a previously recorded programme on DVD. While Recording to a DVD, play a previously recorded programme on HDD. (See pages 76~77)

Automated Quality Adjustment for Timer Recording

If FR mode is selected, the video quality is adjusted automatically so that all video for the scheduled time can be recorded onto the free disc space. (See pages 79~81)

Copying data from a digital camcorder using a DV input jack

Record DV Device video onto HDD and DVD-RAM/±RW/±R discs using the DV input jack (IEEE 1394-4pin/4pin). (See page 75)

High quality progressive scan

Progressive scanning provides high resolution and flicker free video. The 10-bit 54-MHz DAC and 2D Y/C Separating Circuitry provides the highest image playback and recording quality. (See page 44)

DivX Certification

DivX® is a digital video format created by DivX, Inc. This is an official DivX Certified or DivX Ultra Certified device that plays DivX video.

HDMI (High Definition Multimedia Interface)

HDMI reduces picture noise by allowing a pure digital video/audio signal path from the HDD & DVD Recorder to your TV.
This HDD & DVD Recorder supports 576p, 720p and 1080i, 1080p.

Anynet+(HDMI CEC)

Anynet+ is a function that can be used to operate the recorder using a Samsung TV remote control, by connecting the HDD & DVD Recorder to a SAMSUNG TV using an HDMI Cable. (This is only available with SAMSUNG TVs that support Anynet+.) (See Page 38)

EZ Record Mode

This function enables you to initialise and Finalise a disc automatically. (See page 48)

EPG functions
EPG is an Advanced Electronic Programme Guide.
With a Remote Control Unit, you can operate full function.
It has a Auto and Manual Scan facility and Channel Organizing (programmable) facility.

USB Interface for Data Transfer
You can transfer JPEG, MP3 and DivX file of the MP3 player, USB memory or digital camera to a HDD & DVD RECORDER using the USB interface. You can also copy JPEG, MP3 and DivX file of the HDD & DVD RECORDER to MP3 player, USB memory or digital camera using the USB interface.

BEFORE READING THE USER'S MANUAL

Make sure to check the following terms before reading the user manual.

Icons that will be used in manual

Icon	Term	Definition
HDD	HDD	This involves a function available on the HDD.
DVD+VIDEO	DVD	This involves a function available on DVD or DVD±R/-RW(V) discs that have been finalised.
DVD-RAM	RAM	This involves a function available on DVD-RAM.
DVD-RW	-RW	This involves a function available on DVD-RW.
DVD-R	-R	This involves a function available on DVD-R.
DVD+RW	+RW	This involves a function available on DVD+RW.
DVD+R	+R	This involves a function available on DVD+R.
Audio CD	CD-DA	This involves a function available on a data CD (CD-R or CD-RW).
JPEG	JPEG	This involves a function available on CD-R/-RW, DVD±R/±RW/-RAM discs or HDD.
MP3	MP3	This involves a function available on CD-R/-RW, DVD±R/±RW/-RAM discs or HDD.
DivX	DivX	This involves a function available on CD-R/-RW, DVD±R/±RW/-RAM discs or HDD.
	Caution	This involves a case where a function does not operate or settings may be cancelled.
	NOTE	This involves tips or instructions on the page that help each function operate.
	One-Touch button	A function that can be operated by using only one button.
USB	USB	This involves a function available on USB.

About the use of this user's manual

1) Be sure to be familiar with Safety Instructions before using this product. (See pages 2~9)
2) If a problem occurs, check the Troubleshooting. (See pages 104~105)

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HOW TO USE THE HDD & DVD RECORDER

Step 1 : Select the disc type or HDD

Please check available disc type before recording.

If you want to repeatedly record on the same disc or you want to edit the disc after recording, select a rewritable DVD±RW or DVD-RAM type disc. If you want to save a recording without any changes, choose a non-rewritable DVD±R. You can record files directly to the built-in HDD or edit a recorded file.

Step 2 : Format the disc to start recording

Unlike a VCR, the HDD & DVD Recorder starts formatting when an unused disc is inserted. This is required for the preparation of recording on a disc.

Using the HDD

Formatting unnecessary.

Using a DVD-RAM

This type of disc can be formatted in DVD-Video Recording format (VR mode). You can edit recorded images and create a playlist in a specific sequence according to your requirements.

Using a DVD-RW

This type of disc can be formatted in either DVD-Video format (V mode) or DVD-Video Recording format (VR mode). For an unused disc, a message that asks whether to initialise a disc or not. If you select "DVD-VR" or "DVD-V", initialising will be started. You can play a Video mode disc on various DVD components. A VR mode disc allows more varied editing.

Using a DVD-R

Formatting disc is unnecessary and only V Mode Recording is supported. You can play these types of discs on various DVD components only when they have been finalised.

Using a DVD+RW

For an unused DVD+RW disc, a message that asks whether to format a disc or not. If you select "DVD+RW", formatting will be started.

Using a DVD+R

This type of disc will be formatted automatically.

Step 3 : Recording

There are two different recording methods, Direct Recording and Timer Recording. Timer recording is classified as follows:

Recording mode : XP (high quality mode), SP (standard quality mode), LP (long recording mode), and EP (extended mode) according to the recording mode. When recording is set in the FR mode, the best quality picture is recorded with regards to the remaining time on the disc.

Step 4 : Playing

You can select the title you want to play in a displayed menu and then immediately start playback.
A DVD consists of sections, called titles, and sub- sections, called chapters.

Step 5 : Editing a recorded disc

Editing on discs is easier than conventional video tapes. The HDD & DVD Recorder supports many different edit functions, possible only with DVDs and HDD.

With a simple and easy edit menu, you can operate various edit functions, such as delete, copy, rename, lock, etc., on a recorded title.

Creating a playlist (DVD-RAM/-RW in VR mode, HDD)

With this HDD & DVD Recorder, you can create a new playlist on a disc and edit it without the original, pre-existing recording.

Step 6 : Finalising & Playing on other DVD components

To play your DVD on other DVD components, finalising may be necessary. First, finish all editing and recording operations, then finalise the disc.

When using a DVD-RW disc in VR Mode

DVD discs recorded in VR mode can only be played back in DVD recorders, not players.

When using a DVD-RW disc in Video Mode

The disc should be finalised first to enable playback on anything other than this HDD & DVD Recorder. No more editing or recording can be made on the disc once it has been finalised.
To enable recording on the disc again, the disc must be unfinalised.

When using a DVD±R disc

You should finalise the disc to play it on a component other than this HDD & DVD Recorder. You cannot edit or record on the disc once it has been finalised.

- You can finalise the disc automatically using EZ Record function. (See page 48)

Line through writing

UNPACKING

Accessories

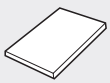
Check for the supplied accessories below.

Video/Audio Cable

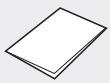
RF Cable for TV

Remote Control

Batteries for Remote Control (AAA Size)



Instruction Manual



Quick Guide

Preparing the Remote Control

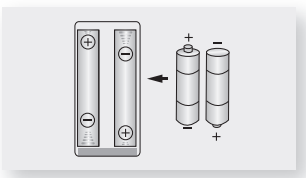
Install Batteries in the Remote Control

- Open the battery cover on the back of the remote control.
- Insert two AAA batteries. Make sure that the polarities (+ and –) are aligned correctly.
- Replace the battery cover.

If the remote does not operate properly :

- Check the polarity +/– of the batteries (Dry-Cell)
- Check if the batteries are drained.
- Check if remote sensor is blocked by obstacles.
- Check if there is any fluorescent lighting nearby.

Dispose of batteries according to local environmental regulations. Do not put them in the household trash.



To determine whether your television is compatible, follow the instructions below.

1. Switch your television on.
2. Point the remote control towards the television.
3. Press and hold the TV STANDBY/ON button and enter the two-figure code corresponding to the brand of your television, by pressing the appropriate number buttons.

• Controllable TV Codes

BRAND	BUTTON
SAMSUNG	01, 02, 03, 04, 05, 06, 07, 08, 09
AIWA	82
ANAM	10, 11, 12, 13, 14, 15, 16, 17, 18
BANG & OLUFSEN	57
BLAUPUNKT	71
BRANDT	73
BRIONVEGA	57
CGE	52
CONTINENTAL EDISON	75
DAEWOO	19, 20, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34
EMERSON	64
FERGUSON	73
FINLUX	06, 49, 57
FORMENTI	57
FUJITSU	84
GRADIENTE	70
GRUNDIG	49, 52, 71
HITACHI	60, 72, 73, 75
IMPERIAL	52
JVC	61, 79
LG	06, 19, 20, 21, 22, 78
LOEWE	06, 69
LOEWE OPTA	06, 57
MAGNAVOX	40
METZ	57
MITSUBISHI	06, 48, 62, 65
MIVAR	52, 77
NEC	83
NEWSAN	68

BRAND	BUTTON
NOBLEX	66
NOKIA	74
NORDMENDE	72, 73, 75
PANASONIC	53, 54, 74, 75
PHILIPS	06, 55, 56, 57
PHONOLA	06, 56, 57
PIONEER	58, 59, 73, 74
RADIOLA	06, 56
RADIOMARELLI	57
RCA	45, 46
REX	74
SABA	57, 72, 73, 74, 75
SALORA	74
SANYO	41, 42, 43, 44, 48
SCHNEIDER	06
SELECO	74
SHARP	36, 37, 38, 39, 48
SIEMENS	71
SINGER	57
SINUDYNE	57
SONY	35, 48
TELEAVA	73
TELEFUNKEN	67, 73, 75, 76
THOMSON	72, 73, 75
THOMSON ASIA	80, 81
TOSHIBA	47, 48, 49, 50, 51, 52
WEGA	57
YOKO	06
ZENITH	63

Result : If your television is compatible with the remote control, it will switch off.
It is now programmed to operate with the remote control.

- If several codes are indicated for your television brand, try each one in turn until you find one that works.
- If you replace the remote control's batteries, you must set the brand code again.

Then you can control the television using the following buttons after pressing the TV button.

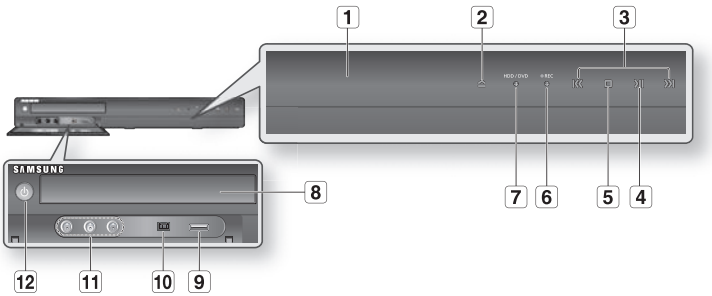
Button	Function
TV STANDBY/ON	Used to switch the television on and off.
SOURCE	Used to select an external source.
TV VOL (+ -)	Used to adjust the volume of the television.
PROG (∧∨)	Used to select the desired channel.
TV MUTE	Used to toggle the sound on and off.
Number	Used to input number directly.

- The functions listed above does not necessarily work on all televisions. If you encounter problems, operate the television directly.

Line through writing

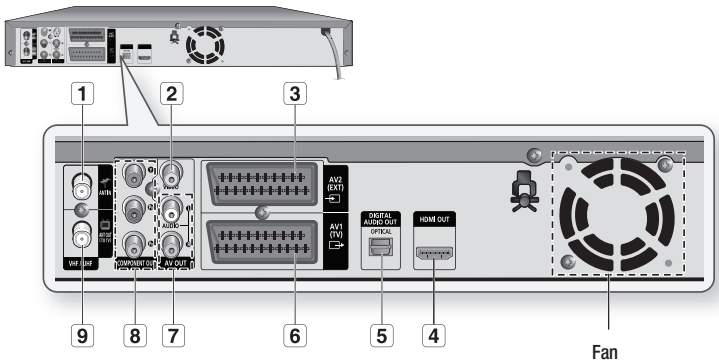
DESCRIPTION

Front Panel (DVD-SH893M/895M/897M)



1	DISPLAY	Displays the playing status, time, etc.
2	OPEN/CLOSE button	Opens and closes the disc tray.
3	SEARCH/SKIP buttons	Goes to the next title/chapter/track or goes back to the previous title/chapter/track. (Playback mode) Select TV preset channels. (Stop mode)
4	PLAY/PAUSE button	Plays a disc or pauses playback.
5	STOP button	Stops disc playback.
6	REC button	Starts recording.
7	HDD/DVD button	Selects HDD/DVD mode.
8	DISC TRAY	Opens to accept a disc.
9	USB HOST	Connects to digital still camera, MP3 player, memory stick, Card reader, externl HDD or other removable storage devices.
10	DV-INPUT	Connects to external digital equipment with a DV jack. (such as a camcorder)
11	AV INPUT 3	Connects to external equipment.
12	STANDBY/ON button	Turns the HDD & DVD Recorder on and off .

Rear Panel



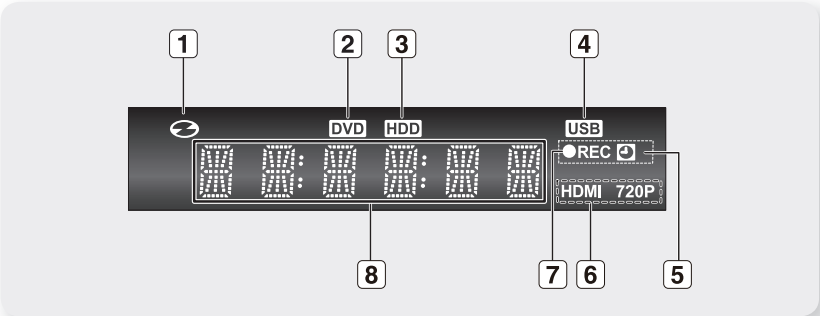
Fan

The fan always revolves when the power is on. Ensure a minimum of 10 cm clear space on all sides of the fan when installing the product.

1	In from aerial connector	Connects RF cable from antenna.
2	VIDEO OUT	Connects the input of external equipment using a Video cable.
3	AV2(EXT) INPUT SCART Connector	Connects to equipment having SCART output jack.
4	HDMI OUT	Connects to equipment having HDMI input.
5	DIGITAL AUDIO OUT(OPTICAL)	Connects to an amplifier having a digital optical audio input jack.
6	AV1(TV) OUTPUT SCART Connectora	Connects to equipment having SCART input jack.
7	AUDIO OUT	Connects to the audio input of external equipment using audio cables.
8	COMPONENT VIDEO OUT	Connects to equipment having Component video input.
9	Out to TV connector	Connects RF cable to TV antenna input.

Line through writing

Front Panel Display

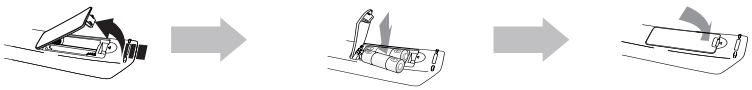


1	In Disc Indicator	Lights status icon.
2	DVD VIEW Indicator	Lights when DVD mode is selected.
3	HDD VIEW Indicator	Lights when HDD mode is selected.
4	USB VIEW Indicator	Lights when USB mode is selected.
5	TIMER Indicator	Lights to indicate the timer record mode.
6	HDMI Indicator	Lights to indicate when HDMI is connected and HDMI resolution status.
7	REC Indicator	Lights in the record mode.
8	STATUS Indicator	Playing time/clock/current status indicator.

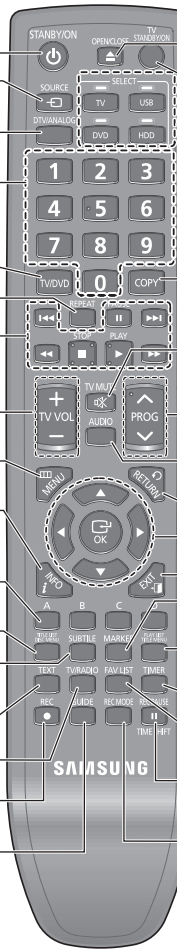
TOUR OF THE REMOTE CONTROL

Your HDD & DVD Recorder remote control will work with Samsung televisions and compatible brands.

Installing batteries in the Remote Control



1. **Lift the cover at the back of the remote control upward as shown.**
2. **Install two AAA size batteries.** Make sure to match the "+" and "–" ends of the batteries with the diagram inside the compartment.
3. **Replace the cover.** Assuming typical TV usage, the batteries last for about one year.



STANDBY/ON button

SOURCE button
Select input signal in external input mode (PROG, AV1, AV2, AV3 or DV input).

DTV/ANALOGUE button
Select Digital/Analogue broadcasting.

NUMBER buttons

TV/DVD button

REPEAT button
Allows you to repeat a title, chapter, track or disc.

Playback-related Buttons
Forward/Rewind, Search, Skip, Stop, Play/Still.

TV VOL button
TV volume adjustment.

MENU button
Brings up the HDD & DVD Recorder's setup menu.

INFO button
Press to display the programme information box in the screen when you use DTV. Allows access to common functions of the HDD & DVD Recorder. (See pages 58~60.)

A, B, C, D button
Allows access to various function of HDD & DVD RECORDER.

TITLE LIST/DISC MENU button
Use this to enter the View Recording list/disc menu.

SUBTITLE button
Press this to switch DVD's subtitle language. When you use DTV, press this button to select the subtitle.

TEXT button
When you use DTV, press this button to select the Teletext OSD.

TV/RADIO button
In **DTV** mode, press this to switch TV or Radio mode

REC button
Use to make a recording on HDD/DVD-RAM/±RW/±R discs.

GUIDE button
Press this to switch programme guide.

OPEN/CLOSE button
To open and close the disc tray.

TV STANDBY/ON button

SELECT
(TV, USB, DVD, HDD)

COPY button

TV MUTE button
In TV mode, this operates as sound mute.

PROG button
Use this to select a TV programme.

AUDIO button
Press this to switch DVD's audio language.
When you use DTV, press this button to select the audio.

RETURN button

OK/DIRECTION buttons (▲▼◄ ► buttons)

EXIT button

MARKER button
Use this to bookmark a position while playing a disc.

PLAY LIST/TITLE MENU button
Use this to return to the Title menu, or to view the recorded files list.

TIMER button
Press to directly enter the Timer Recording Mode menu.

FAV LIST button
When you use DTV, press this button to switch between Favourite list.

REC PAUSE/TIME SHIFT button
Use this to pause during recording. In HDD mode, use this to operate Time shift function.

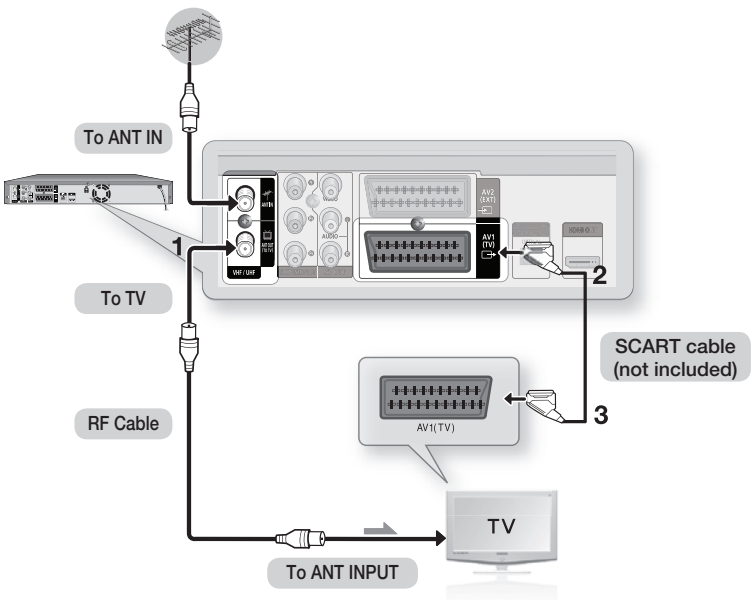
REC MODE button
Use this to set the desired recording time and picture quality. (XP/SP/LP/EP).

CONNECTING THE HDD & DVD RECORDER

This section involves various methods of connecting the HDD & DVD Recorder to other external components and required initial setting modes.

You can connect your HDD & DVD Recorder to the television using the SCART cable if the appropriate input is available on the television.

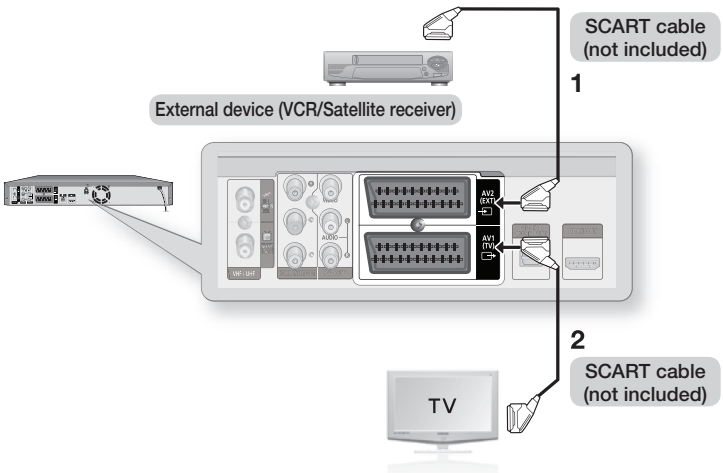
1. Connect the RF cable as shown.
2. Connect one end of the SCART cable to the AV1 socket on the rear of the HDD & DVD Recorder.
3. Plug the other end into the appropriate connector on the television.
4. Plug in the HDD & DVD Recorder and TV
5. Turn on the HDD & DVD Recorder and TV.
6. Press the **SOURCE** button on your TV remote control until the Video signal from the HDD & DVD Recorder appears on the TV screen.



- The RF cable connection of this product sends only signals of TV. You must connect SCART cable or Audio/Video cables to watch output from your HDD & DVD Recorder.

ADDITIONAL CONNECTIONS

You can connect your HDD & DVD Recorder to a External device (VCR/Satellite receiver).



- DVD mode

1. Connect the AV2 connector of HDD & DVD Recorder and External device (VCR/Satellite receiver) using a SCART cable.
2. Connect the AV1 connector to the SCART AV connector on the TV.
3. Turn on the HDD & DVD Recorder, External device (VCR/Satellite receiver) and TV.
4. Set Input mode on AV2.

- TV mode

1. Press the TV/DVD button on remote control, then “TV” appear on Front display.
   (or turn off HDD & DVD Recorder.)
2. You can watch programmes from a satellite or digital tuner connected to this HDD & DVD Recorder, even when the HDD & DVD Recorder is turned off.

Connecting & Setting up

OTHER TYPES OF CONNECTIONS WITH THE VIDEO OUTPUT CABLE

There are several ways to output video signal not using scart cables. Select one of the following video connections that best suits you below.

- **Case 1** : Connecting to a Video (Composite) output jack
- **Case 2** : Component Video output jacks

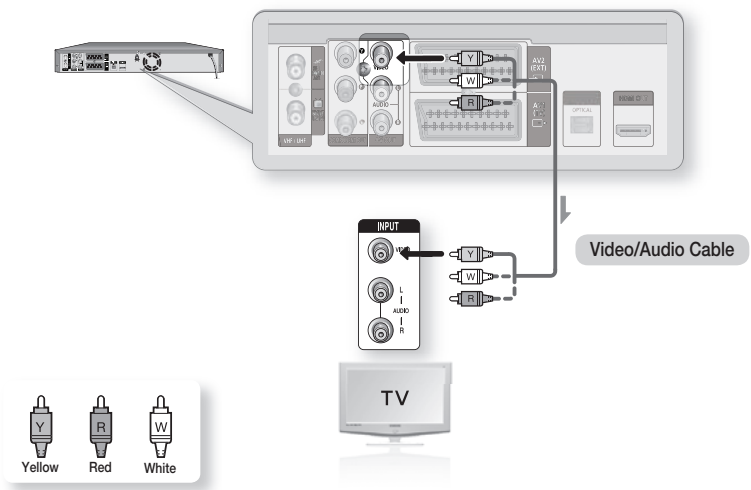
Component video and Progressive Output Modes

- Component video output is available only if your TV supports Component video input.
  If Component video output does not work, check the TV connections and the TV input selection settings.
- Compared to standard interlaced video, progressive scan doubles the amount of video lines fed to your TV, resulting in a more stable, flicker-free, clear image than interlaced video. This is only available with TVs that support progressive scan.
- Progressive Scan Output (576P)
  Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture, in case of 576 progressive scan picture problems, It is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding our TV set compatibility with this model 576P HDD & DVD Recorder, please contact our customer service centre.

Case 1 : Connecting to a Video (Composite) output jack

You will enjoy regular quality images.

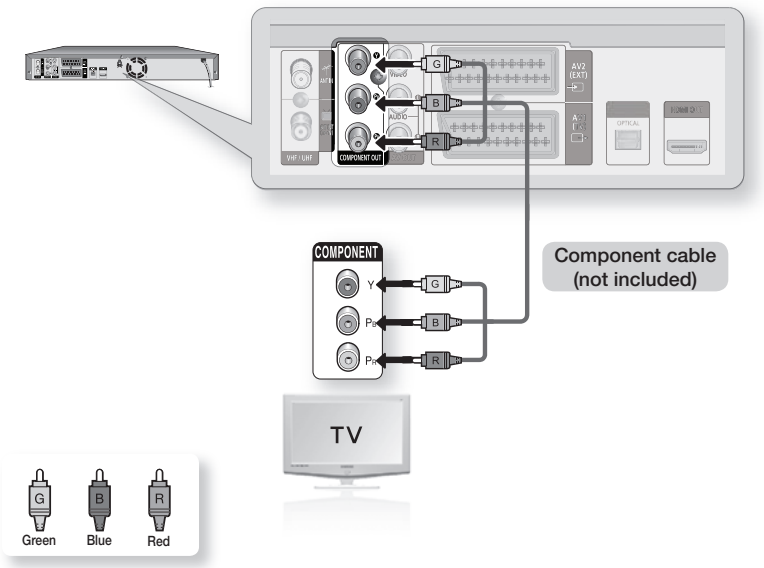
1. Connect a video (Yellow) cable between the VIDEO (yellow) OUT jack on HDD & DVD Recorder and VIDEO (yellow) INPUT jack on your TV (or AV amplifier).
2. Connect audio cables (white and red) between the AUDIO OUT jacks on the HDD & DVD Recorder and AUDIO IN jacks on TV (or AV amplifier). (See pages 26~28)



Case 2 : Component Video output jacks

You will enjoy high quality and accurate colour reproduction images.

1. Connect Component video cables(not supplied) between the COMPONENT OUT(Y, P_B, P_R) jacks on HDD & DVD Recorder and COMPONENT IN(Y, P_B, P_R) jacks on your TV.
2. Connect audio cables (white and red) between the AUDIO OUT jacks on the HDD & DVD Recorder and AUDIO IN jacks on TV (or AV amplifier).
   (See pages 26~28).
3. After connecting, refer to the page 44.



- Make sure that the colour coded connections match. The Y, P_B, P_R component output jacks of your HDD & DVD Recorder must be connected to the exact corresponding component input jacks on your TV.
- Progressive setting is only available when the Video Out is set to Component.
  (See page 44)

Connecting & Setting up

OTHER TYPES OF CONNECTIONS WITH THE AUDIO OUTPUT CABLE

There are several ways to output audio signal not using scart cables. Select the audio connection that best suits you below.

- **Case 1** : Connecting to your TV
- **Case 2** : Connecting to a stereo amplifier with AV output jacks
- **Case 3** : Connecting to an AV amplifier with a digital output jack

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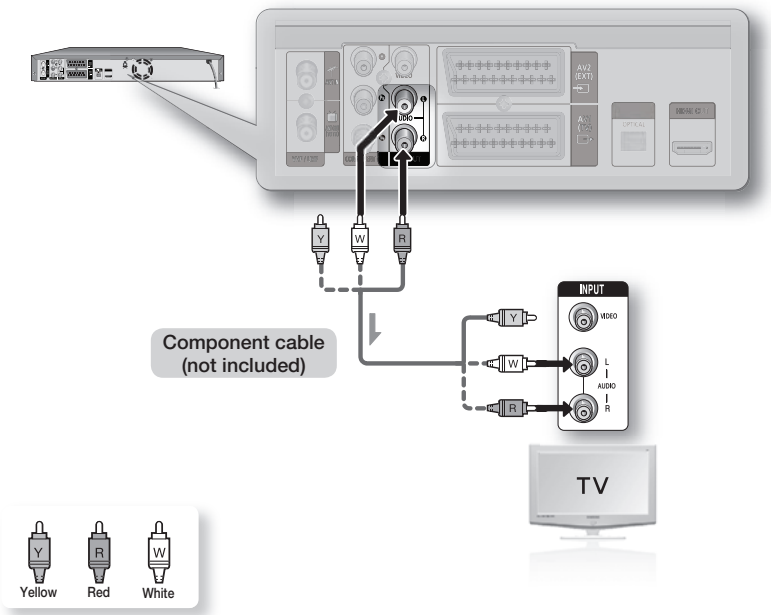
Manufactured under licence from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.

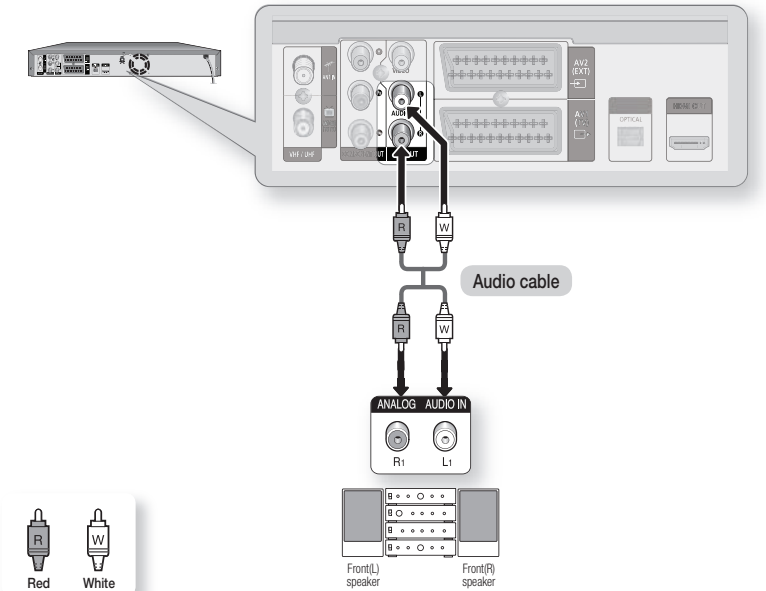
Case 1 : Connecting to your TV

If your TV has audio input jacks, use this connection.



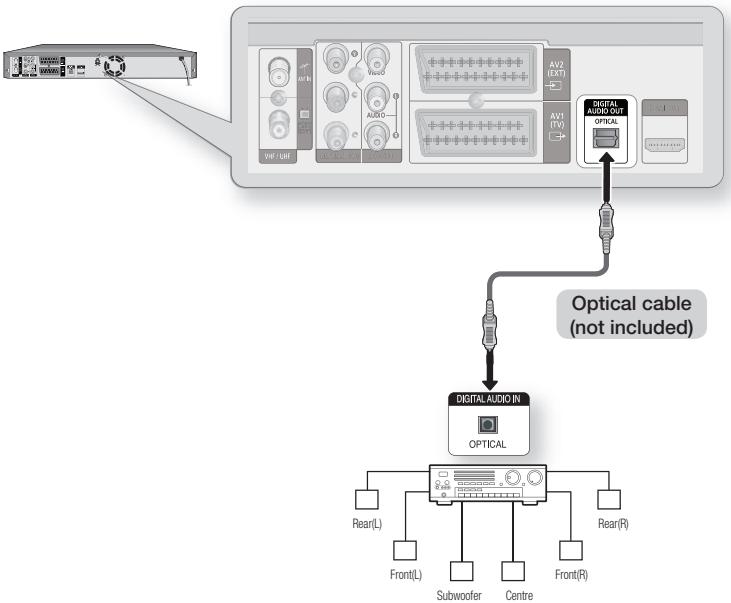
Case 2 : Connecting to a stereo amplifier with AV output jacks

If your stereo amplifier only has AUDIO INPUT jacks (L and R), use the AUDIO OUT jacks



Case 3 : Connecting to an AV amplifier with a digital output jack

If your AV amplifier has a Dolby Digital, MPEG2 or DTS decoder and a digital input jack, use this connection. To enjoy Dolby Digital, MPEG2 or DTS sound, you will need to set up the audio settings. According to your amplifier, connect to an optical cable. (See pages 42~43)



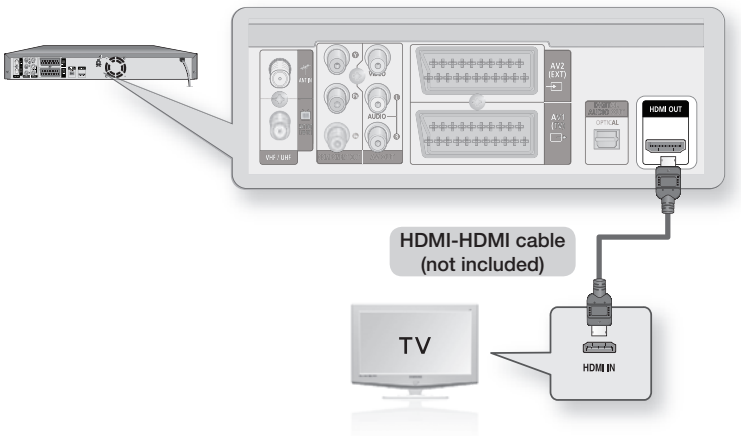
CONNECTING HDMI/DVI TO A TV

If your TV has a HDMI/DVI input, connect HDMI/DVI Adapter cable to a TV. You will enjoy high quality images.

- **Case 1** : Connecting to a TV with HDMI Jack
- **Case 2** : Connecting to a TV with DVI Jack

Case 1 : Connecting to a TV with HDMI Jack

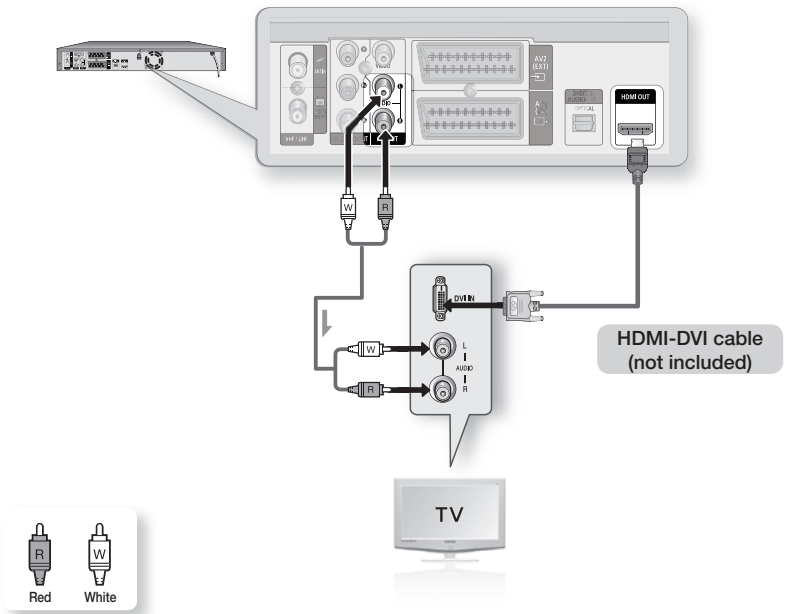
- Using the HDMI cable (not supplied) connect the HDMI OUT jack on the rear of the HDD & DVD Recorder to the HDMI IN jack of your TV.
- Press the input selector on your TV remote control until the HDMI signal from the HDD & DVD Recorder appears on your TV screen.



■ If the HDD & DVD Recorder is connected to your TV in HDMI 1080p output mode, you must use High speed(category2) HDMI cable.

Case 2 : Connecting to a TV with DVI Jack

- Using a DVI Adapter cable (not supplied), connect the HDMI OUT jack on the rear of the HDD & DVD Recorder to the DVI IN jack of your TV.
- Using the audio cables, connect the AUDIO (red and white) OUT jacks on the rear of the HDD & DVD Recorder to the AUDIO (red and white) IN jacks of your TV. Turn on the HDD & DVD Recorder and TV.
- Press the input selector on your TV remote control until the DVI signal from the HDD & DVD Recorder appears on your TV screen.



- To use an HDMI cable (not supplied), make the Audio/Video connection before plugging in the power cord or after finishing the "Plug & Play Setup." Do not connect the HDMI cable while the "Plug & Play Setup" is progressing.
- Progressive scan automatically activates when HDMI is connected.
- If TV/HDMI Receiver does not support DTS, Audio output is not available when you play a disc in DTS format.
- You can switch from the HDMI output to other output only in stop mode.
- If you use an HDMI cable to connect a Samsung TV to the HDD & DVD Recorder, you can operate the recorder using the TV remote control.
  (This is only available with SAMSUNG TVs that support Anynet+(HDMI CEC).) (See pages 39~40)
- Please check the Anynet+ logo (If your TV has an Anynet+ logo, then it supports Anynet+ function.)

- **HDMI (High Definition Multimedia Interface)**
  HDMI is an interface to enable the digital transmission of video and audio data with just a single connector. Since HDMI is based on DVI, it is completely compatible with DVI. The only difference between HDMI and DVI is that HDMI supports multi-channel audio. Using HDMI, the HDD & DVD Recorder transmits a digital video and audio signal and displays a vivid picture on a TV having an HDMI input jack.

- **HDMI connection description**
  HDMI connector - Both uncompressed video data and digital audio data (LPCM or Bit Stream data).
  - Though the HDD & DVD Recorder uses a HDMI cable (not supplied), the HDD & DVD Recorder outputs only a pure digital signal to the TV.
  - If TV does not support HDCP (High -bandwidth Digital Content Protection), snow noise appears on the screen.
- **Why does Samsung use HDMI?**
  Analogue TVs require an analogue video/audio signal. However, when playing a DVD, the data transmitted to a TV is digital. Therefore either a digital-to-analogue converter (in the HDD & DVD Recorder) or an analogue-to-digital converter (in the TV) is required. During this conversion, the picture quality is degraded due to noise and signal loss. HDMI technology is superior because it requires no D/A conversion and is a pure digital signal from the HDD & DVD Recorder to your TV.
- **What is the HDCP?**
  HDCP (High-bandwidth Digital Content Protection) is a system for protecting DVD content outputted via HDMI from being copied. It provides a secure digital link between a video source (PC, DVD. etc) and a display device (TV, projector. etc). Content is encrypted at the source device to prevent unauthorised copies from being made.

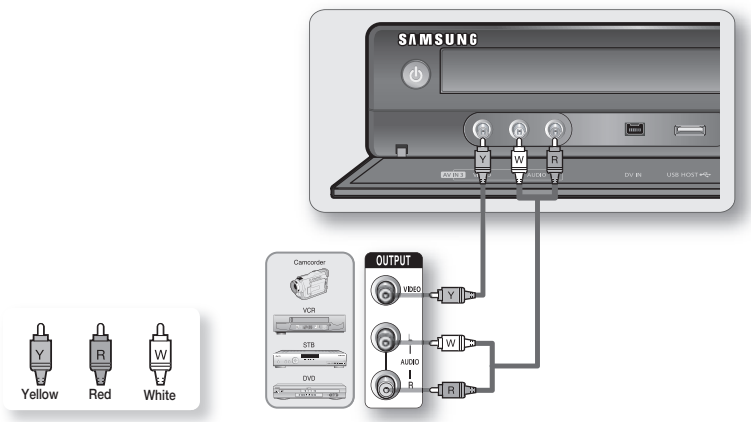
CONNECTING TO AV IN 3, DV INPUT JACK

This allows you to connect your HDD & DVD Recorder to other external devices and view or record their outputs.

- **Case 1** : Connecting a VCR, Set-Top Box(STB), DVD player or Camcorder to the AV IN 3 jacks
- **Case 2** : Connecting a DV Device to the DV IN jack

Case 1 : Connecting a VCR, Set-Top Box(STB), DVD player or Camcorder to the AV IN 3 jacks

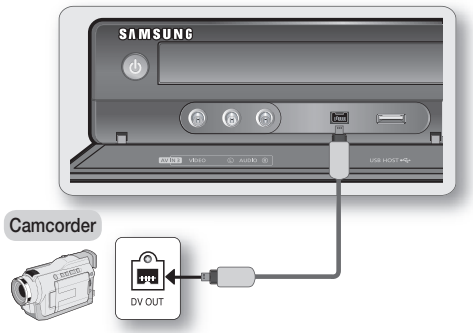
Connecting a VCR or external device to AV IN 3 jacks of the HDD & DVD Recorder. You can record from connected equipment (VCR, STB, DVD player or Camcorder).



- AV IN 3 selection will be automatically done.
  If the input is not selected automatically, use **SOURCE** button to select proper input.
- Copy protected content cannot be recorded.

Case 2 : Connecting a Camcorder to the DV IN jack

If your digital camcorder has a DV output jack, connect it to the DV input jack of your HDD & DVD Recorder.

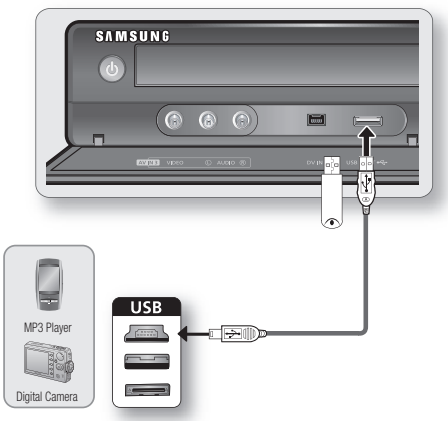


- If the input is not selected automatically, use **SOURCE** button to select proper input.

CONNECTING TO USB DEVICES

This allows you to connect your HDD & DVD RECORDER to USB devices.

Connecting a USB memory, MP3 player, Digital Camera to the USB HOST.

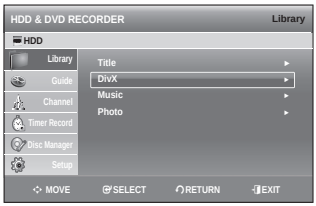


- Disconnecting the USB cable during the data transfer will stop the communication and may damage data stored in the memory.
- When data communication is disrupted due to static electricity, magnetic field or other reason, restart the programme or try to disconnect / connect the USB Cable again.

ON-SCREEN MENU NAVIGATION

The on-screen menus allow you to enable or disable various functions on your HDD & DVD Recorder.
Press the MENU button to open the on-screen menu and then use the following buttons to navigate through the on screen menus.

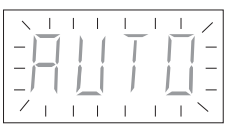
1. ▲▼, ◄ ► buttons
   Press these buttons on the remote control to move the selection bar ▲▼, ◄ ► to cycle through the menu options.
2. **OK** button
   Press this button on the remote control to confirm any new settings.
3. **RETURN** button
   Press this button on the remote control to return to the Previous menu screen displayed or to exit the on-screen menu.
4. **EXIT** button
   Press this button to exit the on-screen menu.

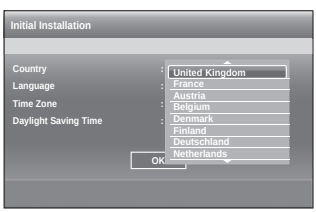


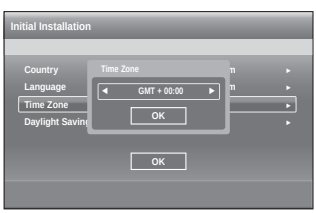
PLUG & PLAY SETUP

Your HDD & DVD Recorder will automatically set itself up when it is plugged in for the first time. TV stations and clock will be stored in memory. The process takes a few minutes. Your HDD & DVD Recorder will then be ready for use.

1. Connect the RF cable as indicated on page 22.
   (Connecting Your HDD & DVD Recorder to the TV Using the RF Cable and scart cable.)
   To use HDMI cable (not supplied), make the Audio/Video connection before plugging in the power cord or after finishing the “Plug & Play Setup” Do not connect the HDMI cable while the “Plug & Play Setup” is progressing.
2. Plug the HDD & DVD Recorder into the mains. “AUTO” in the front panel display flickers.
3. Press the **OK** or ► button, then **Country** option display.
   Press the ▲▼ buttons to select the desired country option, then press the **OK** button.
4. Press the **OK** or ► button, then **Language** option display.
   Press the ▲▼ buttons to select the desired language option, then press the **OK** button.
5. Press the **OK** or ► button, then **Time Zone** option display.
   Press the ◄ ► buttons to select the desired time zone option.
   Press the ▲▼ buttons to select **OK**, then press the **OK** button.



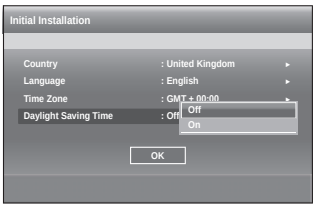


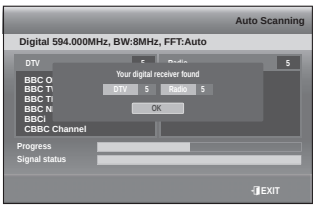


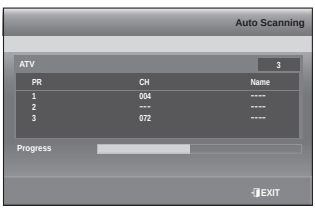
▪ If you select a country, the time zone will be automatically set accordingly.

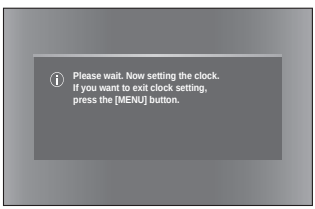
System setup

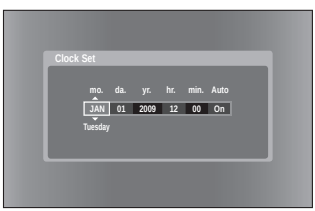
6. Press the **OK** or ► button, then **Daylight Saving Time** option display.
   Press the ▲▼ buttons to select On or Off, then press the **OK** button.
7. Press the ▼ button to select **OK**, then press the **OK** button.
   Digital auto scan will be started.
8. After auto channel scan is completed, the message "Your digital receiver found" will be displayed.
9. Press the **OK** button.
   Analogue auto scan will be started.
10. After auto channel scan is completed, auto clock setting will be started automatically in 10 seconds. If you want to start auto clock setting immediately, press **OK** button.
11. Wait until current date and time are displayed automatically.
    If you want to exit auto clock setting, press **MENU** button.









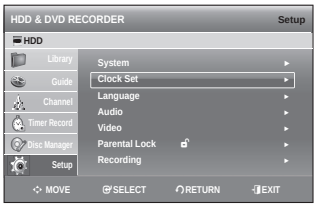


- Now your HDD & DVD Recorder is ready for use. If you wish to retune, you can by using the “Channel Set - Manual Setup (Analogue)” menu. (See pages 36~37)
- Auto setup function can be performed by pressing **STOP** (■) on the unit continuously for 5 seconds or more during power off with no disc inserted.

12. Check the date and time.
    - If it is Correct, press **OK** button then the date and time will be saved. If you don’t press the **OK** button, the date and time will be saved automatically after 5 seconds.
    - If it is Incorrect, input correct **Month**, **Day**, **Year**, **Hour** or **Minute** using ▲▼, ◄ ► buttons or number buttons. Press **OK** button then the date and time will be saved. When you need to change clock setting, you can set up it manually.

CLOCK SET

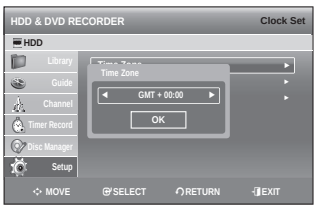
1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Setup**, then press the **OK** or ► button.
3. Press the ▲▼ buttons to select **Clock Set**, then press the **OK** or ► button.



Time Zone

To setup, follow steps 1~3.

4. Press the ▲▼ buttons to select **Time Zone**, then press the **OK** or ► button.
   Select the time zone of your area using the ◄ ► buttons, then select **OK** using ▲▼ button.



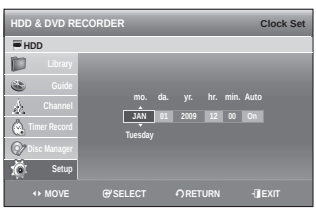
❖ GMT (Greenwich Mean Time) Table

Country	GMT	City
United Kingdom, Portugal	GMT+00:00	Dublin, Edinburgh, London, Lisbon, Casablanca
France, Austria, Belgium, Demark, Germany, Netherlands, Italy, Norway, Spain, Sweden, Switzerland, Hungary, Czech Republic	GMT+01:00	Berlin, Stockholm, Rome, Vienna, Paris, Madrid, Prague, Warsaw, Brussels, Copenhagen, Oslo, Bern, Budapest, Warsaw, Prague
Finland, Turkey, Greece, Eastern Europe	GMT+02:00	Athens, Helsinki, Istanbul, Cairo, Pretoria, Israel

Manual clock set

To setup, follow steps 1~3.

4. Press the ▲▼ buttons to select **Manual Clock Set**, then press the **OK** or ► button.
   Use the ▲▼◄ ► buttons to input Time, Date or Year.
   Use number buttons to input clock data directly.
5. Press the **OK** button, then the date and time will be saved.
   If you don't press the **OK** button, it will not be saved.



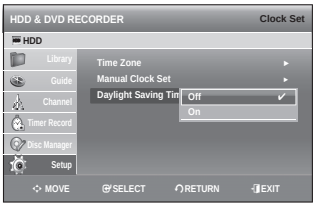
- You must have the RF cable connected to set the Auto Clock. (See page 22)
- The DVD Recorder automatically sets the clock according to the time signal broadcast between the channels PR1 to PR5. If there is no clock in the analogue broadcast, the clock will be searched automatically in the DVB-T. If you do not need the Auto clock set function, select **Off**.
- If there is a difference between the time information of analogue and the one of digital, you may not be available to view the contents of DVB-T normally.

System setup

Daylight Saving Time

To setup, follow steps 1~3 on page 35.

4. Press the ▲▼ buttons to select **Daylight Saving Time**, then press **OK** or ► button.
5. Select the **Off** or **On** using the ▲▼ buttons, then press the **OK** or ► button.



CHANNEL SET

This menu consist of 5 sub-menus (Channel List (Digital), Favourite List (Digital), Auto Scanning, Manual Scanning (Digital), Manual Setup (Analogue).

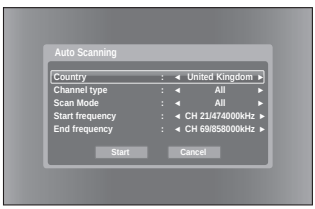
1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Channel**, then press the **OK** or ► button.

Auto Scanning

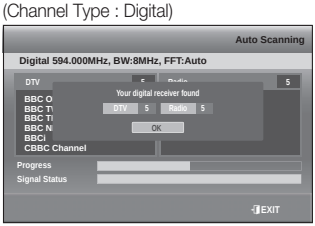
This function will automatically store any channels that can be found through the RF connection.

To setup, follow steps 1~2 on page 36.

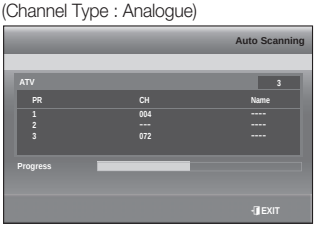
3. Press the ▲▼ buttons to select **Auto Scanning**, then press **OK** or ► button.
   The message "Auto Scanning will remove all channels. Press [OK] to continue,[RETURN] to exit." will be displayed.
4. Press the **OK** button, then press Press the ▲▼◄ ► buttons to select **desired options**.
   - **Country** : Press the ◄ ► buttons to select desired country.
   - **Channel type** : Press the ◄ ► buttons to select Digital, Analogue or All. (If you select Analogue, you can not select the Scan Mode, Start frequency and End frequency.)
   - **Scan Mode** : - Only Free : Receives signals except for the scrambled signal.
     - All : Receives signals including the scrambled signal.
   - **Start frequency/End frequency** : It is changed automatically when the country is selected.
5. Press the ▲▼ button to select **Start**, then press **OK** button.
   Auto Scan will be started.



(Channel Type : Digital)



(Channel Type : Analogue)



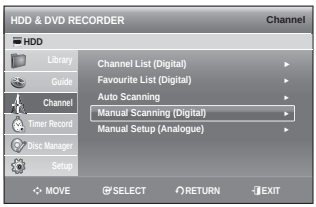
▪ You can select RADIO mode by pressing the **TV/RADIO** button on the remote control.
This button is used to toggle between the TV and RADIO modes.

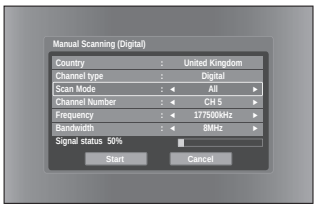
Manual Scanning (Digital)

To tune-in new channels, the HDD & DVD Recorder has been provided with the option Manual Scan where the channel data can be entered by user.

To setup, follow steps 1~2 on page 36.

3. Press the ▲▼ buttons to select **Manual Scanning (Digital)**, then press **OK** or ► button.
4. Select the **Channel Number** which you want to find using ◄ ► buttons.
   Select **Frequency** and input the Frequency of the channel you want to find by pressing the number button.
   Select **Bandwidth** which you want to find using ◄ ► buttons. When the valid frequency is input, the bandwidth is selected automatically. You can select the value of 6,7 or 8 MHz. After select option. Press **OK** button to start the scanning process.

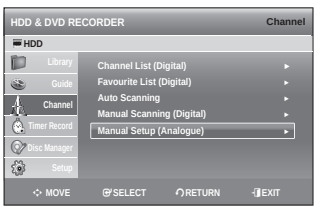


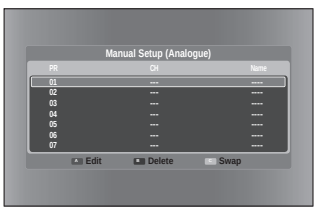


Manual Setup (Analogue)

To setup, follow steps 1~2 on page 36.

3. Press the ▲▼ buttons to select **Manual Setup (Analogue)**, then press **OK** or ► button.
4. Press the ▲▼ buttons to select a **PR**(programme) you wish to edit, delete, or swap, then press the **COLOUR** button.
   Select **Edit**, **Delete** or **Swap**.
   - **Edit- RED(A) button** : You can add or edit programme (PR) information. After you have changed the PR information (**CH**, **Name**, **MFT**), select **Save**, then press the **OK** button.
     - **CH** : Tune the channel using ◄ ► buttons.
     - **Name** : Display station name automatically detected in broadcasting signal. If not detected, you can edit name by using ▲▼◄ ► buttons.
     - **MFT (Manual Frequency Tunning)** : You can tune the channel frequency manually using ◄ ► buttons.
   - **Delete GREEN(B) button** : The selected programme will be removed.
   - **Swap YELLOW(C) button** : You can swap the channel information of two programmes (PR). For example, if you wish to swap PR2 and PR5, select swap at PR2, then press the **OK** button at PR5.





System setup

Channel List (Digital)

This function is possible in DVB-T mode only.
This function is used to edit the favourite channel list or delete the channel.

To setup, follow steps 1~2 on page 36.

3. Press the ▲▼ buttons to select **Channel List (Digital)**, then press **OK** or ► button.
4. To delete a channel from the Channel List (Digital), press the **RED(A)** button. Press the **OK** button to watch that channel.

- Press **OK** button in the DVB-T view to display the Channel List (Digital).
- You can select RADIO mode by pressing the **TV/RADIO** button on the remote control.
  This button is used to toggle between the TV and RADIO modes.
- If a new channel is added or a lesser number of channels are received than the TV channels, run Auto Scanning again.

Favourite List (Digital)

This function is possible in DVB-T mode only.
You can immediately register the present channel to the Digital Favourite Channel list.

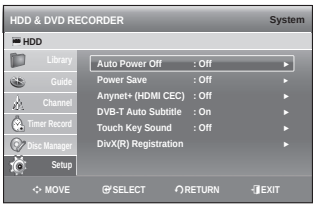
To setup, follow steps 1~2 on page 36.

3. Press the ▲▼ buttons to select **Favourite List (Digital)**, then press **OK** or ► button.
4. To add the current channel the Digital Favourite channels, press the **YELLOW(C)** button.
   To delete a favourite channel from the Digital Favourite channel list, press the **RED(A)** button.
   Press the **OK** button to watch that channel.

SETTING UP THE SYSTEM OPTIONS

This function allows you to setup the system setting.

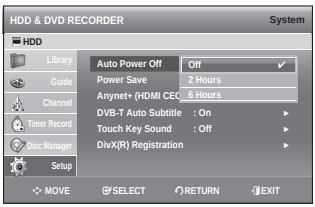
1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Setup**, then press the **OK** or ► button.
3. Press the ▲▼ buttons to select **System**, then press the **OK** or ► button.
4. Press the ▲▼ buttons to select the desired system option, then press the **OK** or ► button.
5. Press the ▲▼ buttons to select the desired item, then press the **OK** or ► button.



Auto Power Off Setting

This feature automatically turns off your HDD & DVD Recorder, if you do not press any button for the selected time.

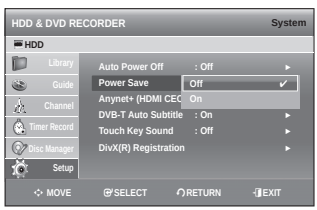
1. Press the ▲▼ buttons to select **Auto Power Off**, then press the **OK** or ► button.
2. Press the ▲▼ buttons to select the desired item, then press the **OK** or ► button.
   - **Off** : Auto power off is disabled.
   - **2 Hours** : HDD & DVD Recorder will automatically turn off for 2 hours after the last button is pressed.
   - **6 Hours** : HDD & DVD Recorder will automatically turn off for 6 hours after the last button is pressed.
   - If the turn off time set with the Auto Power off function is reached during playback or recording, the device will operate until the playback or recording is finished.



▪ If you off and on the HDD & DVD Recorder, the option will be returned to default.

Power Save Setting

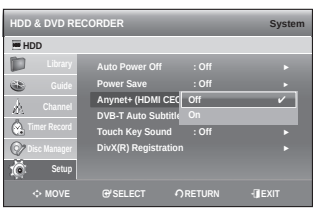
- **On**: If it is set to On and you turn off the HDD & DVD recorder, the recorder enters the Power Save and the front panel display goes off.
- **Off** : Does not set to Power Save. Normally select OFF mode.



Anynet+ (HDMI CEC)

Anynet+ is a function that can be used to operate the recorder using a Samsung TV remote control, by connecting the HDD & DVD Recorder to a SAMSUNG TV using an HDMI Cable. (See pages 31~32) (This is only available with SAMSUNG TVs that support Anynet+.)

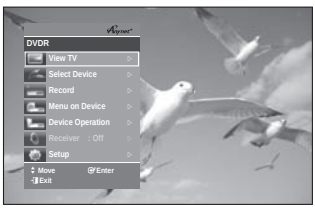
1. Press the ▲▼ buttons to select **Anynet+ (HDMI CEC)**, then press the **OK** or ► button. **Anynet+ (HDMI CEC)** items will be displayed.
2. Press the ▲▼ buttons to select On, then press the **OK** or ► button.



System setup

For using Anynet+ (HDMI CEC)

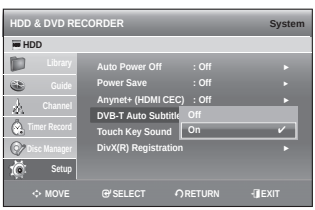
1. Connect the HDD & DVD Recorder to a Samsung TV with an HDMI cable. (See pages 29~30)
2. Set the Anynet+ (HDMI CEC) to "On" on your HDD & DVD Recorder. (See page 39)
3. Set the Anynet+ function on your TV.
   (See the TV instruction manual for more information.)
   - You can operate the HDD & DVD Recorder by using TV remote control.
     (TV buttons that can be used to control the HDD & DVD Recorder : ◀◀, ■, ▶▶, ❚❚, ▶▶, ▲, ▼, ◀, ▶, 0~9, REC and colour buttons.)
   - When you press Anynet+ button on the TV's remote control, the **< TV Menu >** OSD to the left will appear.
     - **Select Device** : Use this option to select device.
     - **Record** : Use this option to start recording or stop recording.
     - **Menu on Device** : Same as **MENU** ( ) button on the HDD & DVD Recorder remote control.
     - **Device Operation** : Same as **INFO** ( ) button on the HDD & DVD Recorder remote control.



- By pressing the **Power On** button of the recorder while watching TV, the TV screen will change to the play screen.
- If you power on a HDD & DVD Recorder when the TV power is off, the TV will power On.
- If you turn the TV off, the HDD & DVD Recorder will power off automatically. (When the HDD & DVD Recorder is recording, it can't be powered off.)
- If you change the HDMI to other sources (Composite, Component, RF... etc) in TV while playing the DVD disc, the HDD & DVD Recorder will stop playing. But the HDD & DVD Recorder may keep the DVD disc Recording.

DVB-T Auto Subtitle

- **On** : The subtitle is shown automatically when watching the DVB-T.
- **Off** : The function is cancelled.

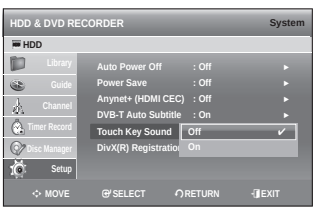


- It is available when watching a programme that has subtitles.

Setting the Touch Key Sound On / Off

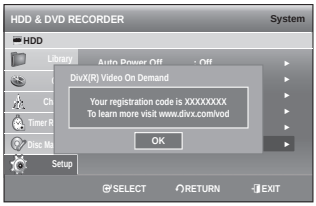
To setup, follow steps 1 through 3 above.

4. Press the ▲▼ buttons to select **Touch Key Sound**, then press the **OK** or ► button.
5. Press the ▲▼ buttons to select **On** or **Off**, then press the **OK** or ► button.
6. Press the **MENU** button to exit the setup menu.



DivX(R) Registration

Please use the Registration code to register this HDD & DVD Recorder with the DivX(R) Video On Demand format. For more information, visit www.divx.com/vod



SETTING UP THE LANGUAGE OPTIONS

If you set the language options, in advance, they will come up automatically every time you watch a movie.

1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Setup**, then press the **OK** or ► button.
3. Press the ▲▼ buttons to select **Language**, then press the **OK** or ► button.
   Language setup menu will be displayed.
4. Press the ▲▼ buttons to select the desired language option, press the **OK** or ► button.
   - **DVD Audio** : For the disc audio language.
   - **DVB-T Audio** : For the current broadcasting Programme provides audio.
   - **DVD Subtitle** : For the disc subtitles.
   - **DVB-T Subtitle** : For the current broadcasting Programme provides subtitles.
   - **Disc Menu** : For the disc menu contained on the disc
   - **Menu** : For the on-screen menu of your HDD & DVD Recorder.
     - Automatic : Sets the HDD&DVD recorder's menu language to the TV menu language.
     - How to use Automatic?
       1. The TV that you want to connect to should support the Anynet+ feature.
       2. Use the HDMI cable to connect the HDD&DVD recorder to the TV. (See pages 31~32)
       3. If the Anynet+ feature of the HDD & DVD recorder is set to "On" (see page 41) and the menu language is set to "Automatic", then the menu language will be set to the same as that of the TV.
       4. If the TV menu language in Automatic mode is not supported by the recorder, the recorder's menu language will be set to the default.
5. Press the ▲▼ buttons to select the desired language, then press the **OK** or ► button.

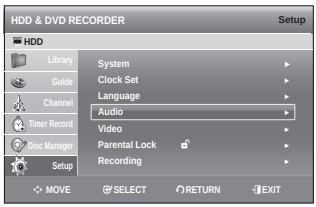
- If the selected language is not recorded on the disc, the original pre-recorded language is selected.
- The selected language will only appear if it is supported on the disc and DVB-T.
- During the playback, press the **SUBTITLE** button to select DVD subtitle. Because the default of DVD subtitle is off, press the ▲▼ button to select the desired subtitle.

System setup

SETTING UP THE AUDIO OPTIONS

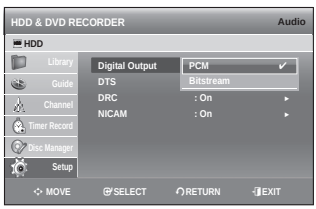
You can connect the HDD & DVD Recorder to an external amp or Home theatre.
Allows you to setup the Audio device and sound status depending on the audio system in use.
You can also set NICAM mode.

1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Setup**, then press the **OK** or ► button.
3. Press the ▲▼ buttons to select **Audio**, then press the **OK** or ► button.
4. Press the ▲▼ buttons to select the desired audio option, then press the **OK** or ► button.
5. Press the ▲▼ buttons to select the desired item, then press the **OK** or ► button.



Digital Output

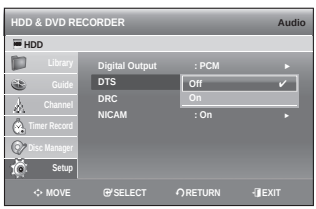
- **PCM** : Select this when your equipment is not Dolby Digital (or MPEG-2) compatible.
- **Bitstream** : Outputs Dolby Digital (or MPEG-2) audio as bitstream. Select this when your AV receiver or AV amplifier has a Dolby Digital (or MPEG-2) Decoder.



- Digital output setting is equally applied to both Dolby Digital and MPEG-2 audio. LPCM sound track is always outputted as PCM. It has no relation with Digital Output setting.
- Be sure to select the correct Digital Output or you will hear no sound or a loud noise.

DTS

- **Off** : Doesn't output DTS signal. Select this when your AV receiver (or AV amplifier) does not have DTS decoder.
- **On** : Outputs DTS Bitstream via digital output when you play DTS track. Select this only when your AV receiver (or AV amplifier) have DTS decoder.

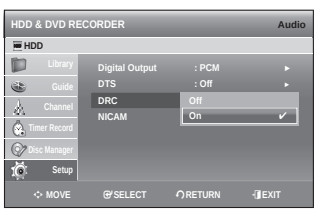


- When DTS soundtrack is played, sound does not output from AV Audio Output.

DRC

This is only active when a Dolby Digital signal is detected.

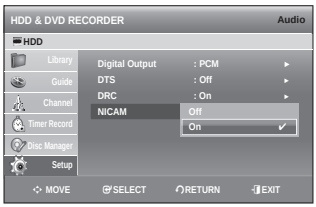
- **On** : When Movie soundtracks are played at low volume or from smaller speakers, the system can apply appropriate compression to make low-level content more intelligible and prevent dramatic passages from getting too loud.
- **Off** : You can enjoy the movie with the standard Dynamic Range.



NICAM

NICAM programmes are divided into 3 types. NICAM Stereo, NICAM Mono and Bilingual (transmission in another language). NICAM programmes are always accompanied by a standard mono sound broadcast and you can select the desired sound by setting NICAM on or off.

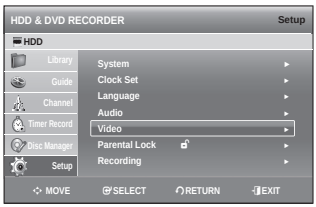
- **On** : NICAM mode
- **Off** : Only set at this position to record the standard mono sound during a NICAM broadcast if the stereo sound is distorted due to inferior reception conditions.



SETTING UP THE VIDEO OPTIONS

This function allows you to setup the video setting.
This function depends on disc type. It may not work for some disc types.

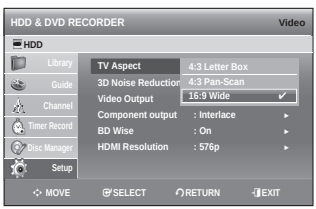
1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Setup**, then press the **OK** or ► button.
3. Press the ▲▼ buttons to select **Video**, then press the **OK** or ► button.
   Video setup menu will be displayed.
4. Press the ▲▼ buttons to select the desired video option, then press the **OK** or ► button.
5. Press the ▲▼ buttons to select the desired item, then press the **OK** or ► button.



TV Aspect

You may want to adjust the screen setting Depending on the type of television you have. (aspect ratio)

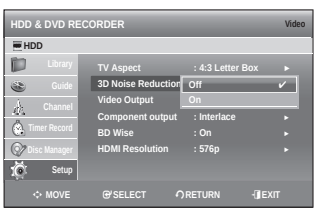
- **4:3 Letter Box** : Select when you want to see the total 16:9 ratio screen DVD supplies, even though you have a TV with a 4:3 ratio screen. Black bars will appear at the top and bottom of the screen.



- **4:3 Pan-Scan** : Select this for conventional size TV when you want to see the central portion of the 16:9 screen. (Extreme left and right side of movie picture will be cut off.)
- **16:9 Wide** : You can view the full 16:9 picture on your wide screen TV.

3D Noise Reduction (motion adaptive noise reduction)

- **Off** : Normal
- **On** : Provides a clear picture through noise reduction (for recording).

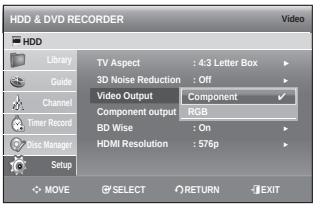


System setup

Video Output

You can enjoy high quality image through RGB or Component video connections. RGB video output is available connecting scart jack (AV1) and component video output is available connecting component (Y, P_B, P_R) jack. Only one of these signals can be selected at one time.

- Component
- RGB



In Component mode, you can set video output to Progressive or Interlace, see page 44.
When the HDMI cable (not supplied) is not connected, available video output jacks are as follow.

Available Video Output Jack

Output jack \ Setting mode		Component mode	RGB MODE
Component Output (Y, P_B, P_R)		0	X
AV1 Scart	R, G, B	X	0
	Composite	0	X
Composite Video out		0	0

▪ When the HDMI cable(not supplied) is connected, RGB output does not operate. Video output is set to Component.

COMPONENT OUTPUT (PROGRESSIVE SCAN)

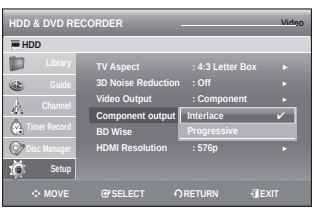
This function is available when video output is component. This setting enables you to select a desired progressive mode. To view 'Progressive scan mode', first connect the component cable. (See page 27) Be sure the Component cables are connected properly.

- **Progressive**

  The message "Do you want to maintain progressive mode? Reverting in 10 seconds." will be displayed.
  Select "Yes" to revert progressive mode.

- **Interlace**

  The message "Do you want to maintain interlace mode? Reverting in 10 seconds." will be displayed.
  Select "Yes" to revert interlace mode.



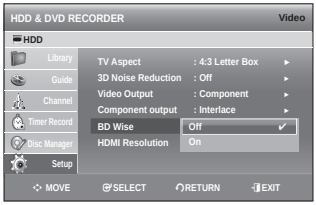
▪ When the HDMI cable (not supplied) is connected, this screen is not displayed.

BD Wise (Only Samsung products)

BD Wise is Samsung's latest inter-connectivity feature.

When you connect Samsung products with BD-Wise to each other via HDMI, the optimum resolution will be set automatically.

- **On** : The original resolution of the DVD disc will be output to the TV directly.
- **Off** : The output resolution will be fixed according to the Resolution previously set, regardless of the resolution of the disc.

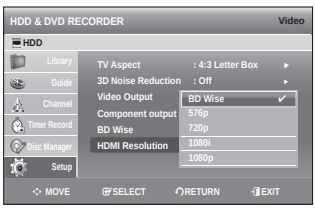


- If you want to change the resolution in BD Wise, you must set BD Wise to Off in advance.
- If you set off the BD Wise, the resolution of the connected TV will be adjusted to its maximum resolution automatically.
- If the HDD & DVD Recorder is connected to a device that does not support BD Wise, you can not use BD Wise function.
- For a proper operation of BD Wise, set each **BD Wise** menu of the player and the TV to On respectively.

HDMI RESOLUTION

This setting is used when the unit is connected by HDMI with Display devices (TV, projector, etc).

- **BD Wise** : BD Wise : Automatically selects the optimal resolution according to the TV that supports BD Wise. (The BD Wise menu item appears only if BD Wise is set to On.)
- **576p** 720 x 576
- **720p** : 1280 x 720
- **1080i** : 1920 x 1080
- **1080p** : 1920 x 1080



Output selection

- Connect the HDD & DVD Recorder to your TV via HDMI. Set your TV's input to HDMI.

- The BD Wise menu item appears only if BD Wise is set to On.
  BD wise function is enabled only if BD Wise-compliant Samsung Products are connected with each other using the HDMI cable.
- Progressive scan automatically activates when HDMI is connected.
- Consult your TV User's Manual to find out if your TV supports Progressive Scan. If Progressive Scan is supported, follow the TV User's Manual regarding Progressive Scan settings in the TV's menu system.
- If Video Output is set incorrectly, the screen may be blocked.
- The resolutions available for HDMI output depend on the connected TV or projector. For details, see the user's manual of your TV or projector.
- When the resolution is changed it may take a few seconds for a normal image to appear.

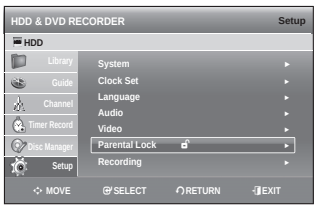
System setup

SETTING UP THE PARENTAL LOCK

The Parental Lock function works in conjunction with DVDs and DVB-T that have been assigned a rating which helps you control the types of DVDs that your family watches. There are up to 8 rating levels on a disc.

DVD-VIDEO

1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Setup**, then press the **OK** or ► button.
3. Press the ▲▼ buttons to select **Parental Lock**, then press the **OK** or ► button.
   When you operate your HDD & DVD Recorder for the first time, the “Create the Password” message will be displayed.
4. Enter the 4-digit password using the number buttons on the remote control.
   The “Confirm the password” message will be displayed. Enter your password again.

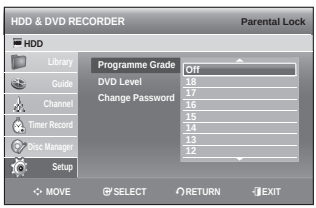


If you forgot your password

1. Switch the DVD mode and remove the disc.
2. Press and hold the **PLAY/PAUSE** (❯II) button on the front panel for 10 seconds or more.

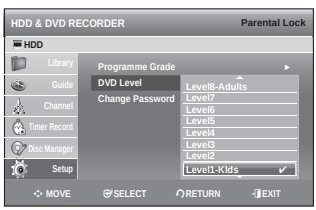
Setting the Programme Grade

1. Press the ▲▼ buttons to select **Programme Grade**, then press the **OK** or ► button.
2. Press the ▲▼ buttons to select the programme grade you want, then press the **OK** or ► button.
   For example, if you select up to 15, DVB-T that contain 16, 17, 18 will not display. A larger number indicates that the programme is intended for adult use only.



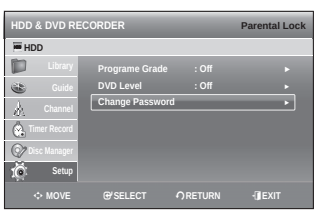
Setting the DVD Level

1. Press the ▲▼ buttons to select **DVD Level**, then press the **OK** or ► button.
2. Press the ▲▼ buttons to select the **DVD Level** you want, then press the **OK** or ► button.
   For example, if you select up to 6, discs that contain 7, 8 will not play.
   A larger number indicates that the programme is intended for adult use only.



Changing the Password

1. Press the ▲▼ buttons to select **Change Password**, then press the **OK** or ► button.
2. Enter the 4-digit password using the number buttons on the remote control. The “Confirm the password” message will be displayed.
3. Enter your password again using the number buttons on the remote control.

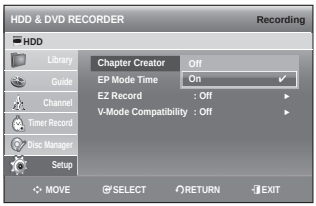


Automatic Chapter Creator

DVD-RW DVD-R DVD+RW DVD+R

(V-mode)

A DVD-Video consists of 'Titles' and 'Chapters'. When you record one programme, it makes one Title. If you use this function, the Title will be divided into Chapters.



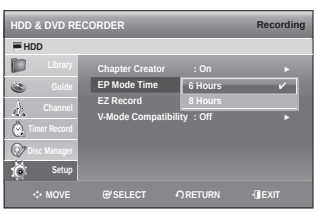
1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Setup**, then press the **OK** or ► button.
3. Press the ▲▼ buttons to select **Recording**, then press the **OK** or ► button.
4. Press the ▲▼ buttons to select **Chapter Creator**, then press the **OK** or ► button.
5. Press the ▲▼ buttons to select **Off** or **On**, then press the **OK** or ► button.
   - **Off** : Select if you do not want to use Automatic Chapter Creator.
   - **On** : Select this option to use the Automatic Chapter Creator feature.

   Press the **EXIT** button to exit the menu.
6. Press the **REC** button to start recording.
   (See page 71 about how to set recording speed)
   The message "Do you want to create the chapter menu after this recording?" is displayed.
7. Press the ◄ ► buttons to select **OK**, then press the **OK** button.
   - A new chapter is created according to the selected recording mode. A chapter will be about 5 minutes long in XP and SP, and about 15 minutes long in LP and EP mode.
8. Press the **STOP** button to stop recording.
9. To display the created titles, finalise the disc (See page 102) and then press the **TITLE MENU** button. The title menu will be displayed.
   - Finalising is generally unnecessary when using a DVD+RW disc.
10. To display the created chapters, select the desired Title and then press the **DISC MENU** button. The chapter menu for the selected Title will be displayed.

▪ The Automatic Chapter Creator function does not work during Timer Recording or when you turn the power off.

EP Mode Time Setting

You can select one of four recording modes by pressing the **REC MODE** button repeatedly.
In EP(Extended Play) mode, you can set recording time to 6 or 8 hours with this setting.



System setup

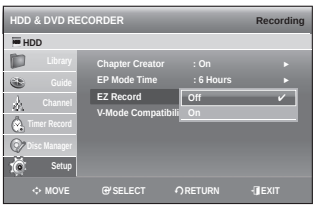
EZ Record

DVD-RW DVD-R DVD+RW DVD+R

(V-mode)

This function enables you to initialise and Finalise a disc automatically.

1. Press the ▲▼ buttons to select **EZ Record**, then press the **OK** or ► button.
2. Press the ▲▼ buttons to select **On**, then press the **OK** or ► button.
   Press the **EXIT** button to exit the menu.
3. Insert a disc.
   If the disc is new, It is initialised to V mode automatically. (DVD-RW only)
4. Press the **REC** button.
5. EZ Record function will automatically Finalise the disc under the following conditions.
   - When you press the **OPEN/CLOSE** button on your HDD & DVD Recorder after recording on at least 70% of the disc.
     The tray will open after the disc has been finalised.
   - The above feature is available only when a DVD-RW(V), DVD+R or DVD-R disc is inserted.

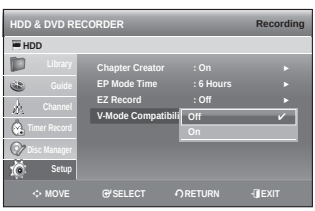


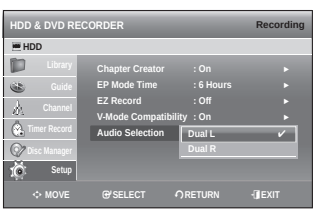
- If you insert a new DVD-RW disc, It is initialised to V mode automatically.
- If you insert a new DVD+RW disc, it will be formatted automatically.
- If you select off, you must initialise (see page 70) and finalise the disc manually in the Disc Manager menu. (see page 102)
- The length of Recording is different according to recording mode. (see page 71)

V-Mode Compatibility

This feature is about the setup for selecting audio when recording the Dual STEREO (Multi-audio) broadcasting on HDD. It does not directly affect DVD recording of a programme.

- **Off** : Both “Dual L” and “Dual R” of the multi-audio broadcasting are recorded on HDD. Titles recorded on HDD under such setup status cannot be copied to DVD+RW/±R or DVD-RW (V mode).
- **On** : Either “Dual L” or “Dual R” of the multi-audio broadcasting is recorded on HDD. Titles recorded on HDD under such setup status can be copied to DVD+RW/±R or DVD-RW (V mode) “Dual L” and “Dual R” options can be selected from “Audio Selection.”



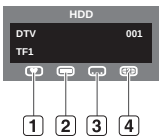


BASIC FUNCTIONS

Display Screen

After the television channels have been stored, you will see the following picture(banner) each time you switch channels.

Banner Elements

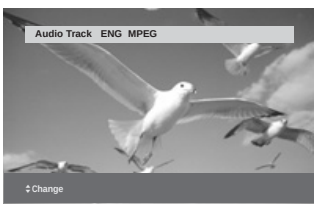


1	Displays the favourite channel.
2	Displays the teletext.
3	Displays the subtitle.
4	Displays the multi audio.

- The icon is displayed according to the service information of signal.
- The icon is displayed only with more than one audio type and language.
- By pressing the *i* button, you can see the detailed information.

Select Audio Track

1. Press the **AUDIO** button to see the Audio track list.
2. Press the ▲▼ buttons to select desired Audio track, then press the **OK** button.



Setting the Favourite List(Digital)

You can immediately register the present channel to the Digital Favourite Channel List.

1. Press the **FAV LIST** button while you are viewing a programme.
2. To add the current channel to the Digital Favourite channels, press the **YELLOW(C)** button.
   To delete a favourite channel from the Digital Favourite channel list, press the **RED(A)** button.

– To watch the Favourite List(Digital) –

Press the **FAV LIST** button and then select the channel.

Press the **OK** button to watch that channel.

DTV functions

Changing the Subtitle Language

When the current broadcasting programme provides subtitle, press the **SUBTITLE** button . If Subtitle is available on current programme, menu bar is displayed on the upper side.

1. Press the **SUBTITLE** button.
2. Press the ▲▼ buttons to select a desired subtitle, then press the **OK** button.

Using the digital text service

When the current broadcasting programme provides teletext, press the **TEXT** button to see the teletext.

1. Press the **TEXT** button, the main menu of digital text will be displayed.
2. Press the ▲▼ or number button to select desired digital text, then press the **OK** button.

Press the **EXIT** button to exit the main menu of digital text.

GUIDE

The electronic programme guide gives you a channel list for the channels.

1. With the unit in Stop mode, press the **MENU** button.
2. Press the ▲▼ buttons to select **Guide**, then press the **OK** or ► button.
   - Press the **GUIDE** button while you are viewing a programme. (DTV)
   - **RED(A) button (Timer Record)** : Setting the Timer Record.
   - **(▶▶I)button** : Go to next day
   - **(I◀◀)button** : Go to previous day
     → It displays programme from now to 7 days after.
   - **▲▼◄ ► button** : select the programme and station.
   - **INFO button (Information)** : View the detail information

- The contents of cell could be displayed slowly according to the broadcasting.
- If 'Daylight Saving Time' and 'GMT Time' settings are wrong, EPG Time will be incorrect.

Guide Timer Recording

Make sure that clock must be set before operating this function. (see pages 35~36)

1. Press the ▲▼◄ ► buttons to select desired programme, then press **RED(A)** button.
2. Set timer recording option.
   - Target Media: Select the media to record HDD or DVD.
   - Series Recording: With the series recording function, you can easily and automatically record every episode of a series. Select 'On' if you want to use series recording function. The Series Recording option will be dimmed if the selected programme is not one of a series.

- You can check the setting in the scheduled List. (see pages 78~79)
- The title information is displayed in the Title List as for Guide REC.
- If Timer Rec is set, the icon is displayed in the set programme.
- Up to 12 recordings are possible including guide recording and general recording.

Playback

This section introduces basic functions of playback and playback by disc type.
Read the following information before playing a disc.

REGION CODE (DVD-VIDEO ONLY)

Both the HDD & DVD Recorder and the discs are coded by region. These regional codes must match in order for the disc to play. If the codes do not match, the disc will not play. The Region Number for this HDD & DVD Recorder is described on the rear panel of the HDD & DVD Recorder.

LOGOS OF DISCS THAT CAN BE PLAYED

Dolby Digital	DTS	Digital Audio	
Stereo	PAL broadcast system in U.K, France, Germany, etc.	DivX	MP3

DISC TYPES THAT CAN BE PLAYED

Disc Types	Disc Logo content	Recorded content	Disc Shape	Max. Playing Time
DVD-VIDEO	DVD VIDEO	AUDIO VIDEO	Single sided(12cm)	240 min.
			Double sided(12cm)	480 min.
			Single sided(8cm)	80 min.
			Double sided(8cm)	160 min.
AUDIO-CD	COMPACT disc DIGITAL AUDIO	AUDIO	Single sided(12cm)	74 min.
			Single sided(8cm)	20 min.
JPEG		JPEG Image	Single sided(12cm)	-
			Single sided(8cm)	-
MP3		MP3 Audio	Single sided(12cm)	-
			Single sided(8cm)	-
DivX	DivX	DivX Movie	Single sided(12cm)	-
			Single sided(8cm)	-
DVD-RAM	DVD RAM	AUDIO VIDEO	Single sided(12cm) (4.7GB)	1 hr. (XP: Excellent Quality)
				2 hrs. (SP: Standard Quality)
				4 hrs. (LP: Long Playback)
				6 or 8 hrs. (EP:Extended)
			Double sided(12cm) (9.4GB)	2 hr. (XP: Excellent Quality)
				4 hrs. (SP: Standard Quality)
				8 hrs. (LP: Long Playback)
				12 or 16 hrs. (EP:Extended)

Disc Types	Disc Logo content	Recorded content	Disc Shape	Max. Playing Time
DVD-RW		AUDIO VIDEO	12cm (4.7GB)	1 hr (XP: Excellent Quality) 2 hrs (SP: Standard Quality) 4 hrs (LP: Long Playback) 6 or 8 hrs (EP:Extended)
DVD-R		AUDIO VIDEO	Single Layer(12cm) (4.7GB)	1 hr (XP: Excellent Quality) 2 hrs (SP: Standard Quality) 4 hrs (LP: Long Playback) 6 or 8 hrs (EP:Extended)
			Dual Layer(12cm) (8.5GB)	1 hr. 50min (XP : Excellent Quality) 3 hrs. 40min (SP : Standard Quality) 7 hrs. 20min (LP : Long Playback) 11 or 14 hrs. 40min (EP : Extended)
DVD+RW		AUDIO VIDEO	12cm (4.7GB)	1 hr (XP: Excellent Quality) 2 hrs (SP: Standard Quality) 4 hrs (LP: Long Playback) 6 or 8 hrs (EP:Extended)
DVD+R		AUDIO VIDEO	Single Layer(12cm) (4.7GB)	1 hr (XP: Excellent Quality) 2 hrs (SP: Standard Quality) 4 hrs (LP: Long Playback) 6 or 8 hrs (EP:Extended)
			Dual Layer(12cm) (8.5GB)	1 hr. 50min (XP : Excellent Quality) 3 hrs. 40min (SP : Standard Quality) 7 hrs. 20min (LP : Long Playback) 11 or 14 hrs. 40min (EP : Extended)
CD-R/-RW DVD-RAM/-RW/-R		JPEG MP3 DivX	-	-

Discs that cannot be played

- DVD-Video with a region number other than “2” or “ALL”
- 3.9 GB DVD-R Disc for Authoring.
- DVD-RAM/-RW(VR mode) not recorded following the Video Recording Standard
- A DVD±R/DVD-RW(V) disc which has been recorded and not finalised in a different manufacturer’s recorder.
- DVD-ROM/PD/MV-Disc, etc
- VCD/SVCD/CVD/CD-ROM/CDV/CD-G/CD-I
- BD, HD-DVD

- This HDD & DVD Recorder can only operate with discs that are compatible with DVD-RAM Standard Version 2.0.
- Playback and/or recording may not work for some types of discs, or when specific operations, such as angle change and aspect ratio adjustment, are being performed. Information about the discs is written in detail on the box. Please refer to this if necessary.
- Do not allow the disc to become dirty or scratched, finger prints, dirt, dust, scratches or deposits of cigarette smoke on the recording surface may make it impossible to use the disc for recording.
- DVD-RAM/±RW/±R discs may not be able to play on some DVD players, depending on the player, disc and the condition of the recording.
- Discs with NTSC programmes recorded on them can be played but cannot be recorded using this product.

Playback

PLAYING A DISC

1. Press the **OPEN/CLOSE** button.
2. Place a disc gently into the tray with the disc's label facing up.
3. Press the **OPEN/CLOSE** button to close the disc tray.
   - The HDD & DVD Recorder does not play discs automatically after being powered on initially.
   - When the HDD & DVD Recorder is powered on and a disc is in the tray, the unit will be activated and wait in stop status.
   - Press the **PLAY**(▶) button to start playback.
4. Press the **STOP**(■) button to stop playback.

- When you stop playing back a disc, the HDD & DVD Recorder remembers where you stopped, so when you press **PLAY**(▶) button again, it will pick up where you left off. (Unless the disc is removed or the HDD & DVD Recorder is unplugged, or if you press the **STOP**(■) button twice.)

- Do not move your HDD & DVD Recorder while playing, as this may cause damage to the disc.
- Make sure to press the **OPEN/CLOSE** button to open or close the disc tray.
- Do not push the disc tray while it is being opened or closed, as this may cause a product malfunction.
- Do not place foreign materials on or in the disc tray.
- Some functions may perform differently or be disabled depending on the disc type. If this occurs, refer to the instructions written on the disc case.
- Be especially careful that children's fingers are not caught between the disc tray and the tray chassis when it closes.
- You must only insert one DVD disc at a time. Inserting two or more discs will not allow playback and may cause damage to the HDD & DVD Recorder.

USING THE DISC MENU & TITLE MENU

Some type of discs contain a dedicated menu system that allows you to select special functions for title, chapter, audio track, subtitle, film preview, information on characters, etc.

For DVD-VIDEO Disc

- **Disc Menu** : Press the **DISC MENU** button to enter the disc menu of the disc.
  - Move to the setup menu related to playback operation.
  - You can select audio language and subtitle etc. provided by the disc.
- **Title Menu** : Press the **TITLE MENU** button to move to the title menu of the disc.
  - Some discs may not support the title menu functionality.

For HDD/DVD-RAM/±RW/±R Disc

- **Title List**
  Press the **TITLE LIST** button. Title List is a list of previously recorded programmes. If a title is deleted, that title cannot be played again.
- **Play List (HDD/DVD-RAM/-RW(VR))**
  Press the **PLAY LIST** button. This refers to a list of user-selected titles. When one playlist is played, only the scene selected by the user will play and then stop. Since only the information necessary for playing a desired scene is included in a playlist, even if that playlist is deleted, the original recording will not be deleted. (only VR mode)

USING THE PLAYBACK RELATED BUTTONS

Searching through a Chapter or Track

HDD DVD-VIDEO DVD-RAM DVD-RW DVD-R Audio CD DVD+RW DVD+R

During play, press the **SEARCH** (◀◀ ▶▶) buttons on the remote control.

HDD/DVD-VIDEO/ DVD-RAM/±RW/±R	▶▶ X 2 ➞ ▶▶ X 4 ➞ ▶▶ X 8 ➞ ▶▶ X 16 ➞ ▶▶ X 32 ➞ ▶▶ X 128
DivX	▶▶ X 2 ➞ ▶▶ X 4 ➞ ▶▶ X 8
AUDIO CD (CD-DA)	▶▶ X 2 ➞ ▶▶ X 4 ➞ ▶▶ X 8

- You can scan the programme in reverse.
- When you press and hold the **SEARCH** (◀◀ ▶▶) buttons, playback is done at the default speed of X 4. If you release the **SEARCH** (◀◀ ▶▶) buttons , playback is performed at a normal speed.
- To return to normal speed playback, press the **PLAY** (▶) button.

- You can hear sound during forward search(X 2) in HDD/DVD-VIDEO/DVD-RAM/±RW/±R disc. (No sound is heard during Scan(Search) mode in DivX disc.)
- The speed marked in this function may be different from the actual playback speed.

Skipping Chapters, Titles or Markers

HDD DVD-RAM DVD-RW DVD-R Audio CD DVD+RW DVD+R

During play, press the **SKIP** (⏮ ⏭) buttons on the remote control.

- **If you press the SKIP (⏮) button,**
  it moves to the beginning of the chapter or title or marker. Pressing the button once again within 3 seconds returns to the beginning of the previous chapter or title or marker
- **If you press the SKIP (⏭) button,**
  it moves to the next chapter or track or marker

Slow Motion Play

HDD DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R DivX

In pause mode, press the **SEARCH** (◀◀ ▶▶) buttons on the remote control.

- **If you press the SEARCH (▶) button,**
  ▮▶ 1/2 ➞ ▮▶ 1/4 ➞ ▮▶ 1/8
- **If you press the SEARCH (◀) button,**
  ◀▮ 1/2 ➞ ◀▮ 1/4 ➞ ◀▮ 1/8
- To return to normal speed playback, press the **PLAY** (▶) button.

Press and hold the **SEARCH** (◀◀ ▶▶) buttons during pause, the disc will play slowly at 1/4 speed. If the button is released, the pause operation will resume.

- The speed marked in this function may be different from the actual playback speed.
- Slow motion operates only in the forward direction on DivX discs.

Step Motion Play

HDD DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R DivX

Press the **SKIP**(⏮⏭) buttons on the remote control in the pause mode.

- Each time the button is pressed, a new frame will appear.
  When the **SKIP**(⏮) button is pressed, the previous frame will be activated.
  When the **SKIP**(⏭) button is pressed, the next frame will be activated.
- To return to normal speed playback, press the **PLAY** (▶) button.

- Step motion operates only in the forward direction on DivX discs.

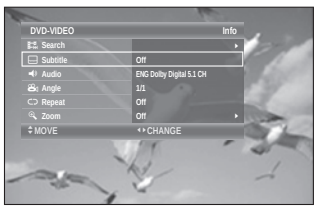
USING THE INFO BUTTON

The INFO function allows you to easily search for a desired scene by accessing title, chapter, time.
You can also change the subtitle and audio settings and set some features including Angle, Repeat, Zoom.

Moving to a scene directly using the INFO

HDD DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R DivX

If you want to move to a certain title, chapter or time, use this function.



1. Press the **INFO** button during playback.
2. Press the ▲▼ buttons to select **Search**, then press the **OK** button or ► button.
3. Press the ▲▼ buttons to select **Title**, **Chapter** or **Time**.
4. Press the ◄ ► buttons or number buttons to select the desired scene, then press the **OK** button.
   In case of searching a time, enter the time in the sequence of hours, minutes, and seconds using the number buttons. Then press the **OK** button.

- This may not work for some discs.
  When an audio CD(CD-DA) or an MP3/JPEG disc is inserted, depending on the disc type, the information display may not appear.
- The Time Search function does not operate on some discs.
- To make the screen disappear, press the **RETURN** button.

SELECTING THE SUBTITLE LANGUAGE

DVD-VIDEO DivX

Selects one of the subtitle language recorded on the disc.
You can also operate this function by pressing the **SUBTITLE** button on the remote control.

1. Press the **INFO** button during playback.
2. Press the ▲▼ buttons to select **Subtitle**.
3. Press the ◄ ► buttons to select the desired subtitle language.

- The subtitle display may be different depending on the disc type.
- Some discs will only allow you to select the language for the disc menu.

SELECTING THE SOUNDTRACKS & AUDIO CHANNELS

Selects one of the soundtracks recorded on the disc. Also selects the audio channels from recorded TV programmes.
You can also operate this function by pressing the AUDIO button on the remote control.

1. Press the **INFO** button during playback.
2. Press the ▲▼ buttons to select **Audio**.
3. Press the ◄ ► buttons to select the desired sound tracks or audio channel.

- Soundtracks or Audio channel may be different because they are disc-specific.
- Some discs allow you to select the audio language for the disc menu only.

CHANGING THE CAMERA ANGLE

When a DVD VIDEO contains multiple angles of a particular scene, you can select the Angle function.

1. Press the **INFO** button during playback.
2. Press the ▲▼ buttons to select **Angle**.
3. Press the ◄ ► buttons to select the desired angle.

- This function is disc-dependent, and may not work on all DVDs.
- This function does not work when a DVD has not been recorded with a multi-camera angle system.
- Displays the current angle, total angle number.

REPEAT PLAY

Playing Repeatedly (Repeat Playback)

You can also operate this function by pressing the **REPEAT** button on the remote control.

1. Press the **INFO** button during playback.
2. Press the ▲▼ buttons to select the **Repeat**.
3. Press the ◄ ► buttons to select **Off**, **A-B** or **Title** or **Chapter** you want to play repeatedly, then press the **OK** button.

- HDD/DVD-RAM/-RW(VR mode), unfinalised DVD±R and unfinalised DVD-RW (V mode) discs will do not repeat a chapter.
- You can also activate Normal Playback by pressing the **EXIT**(✍) button.

Repeat A-B

HDD DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R

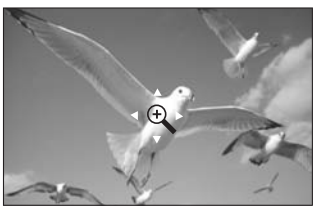
1. Press the **INFO** button during playback.
2. Press the ▲▼ buttons to select **Repeat**.
3. Press the ◄ ► buttons to select **Repeat A-B**, then press the **OK** button.
4. Press the **OK** button at the point where you want the repeat play to start (A) and press it again at the point where you want the repeat play to stop (B). Repeat playback of the A-B section starts.

- If you set point (B) before five seconds of playback has lapsed, the prohibition mark (⊘) will appear.
- You can also activate Normal Playback by pressing the **EXIT**(⏏) button.
- Audio CDs(CD-DA), MP3 discs and DivX discs do not support the Repeat A-B function.

ZOOMING-IN

HDD DVD-VIDEO DVD-RAM DVD-RW DVD-R DVD+RW DVD+R

1. Press the **INFO** button during playback.
2. Press the ▲▼ buttons to select **Zoom**, then press the **OK** or ► button.
   (🔍) will be displayed.
3. Press ▲▼◄ ► buttons to move to the area you want to enlarge.
4. Press the **OK** button.
   The screen will be enlarged to twice the normal size. The screen size will be enlarged to four times the normal size.



HDD/DVD-VIDEO/DVD-RAM/±RW/±R	normal size → X2 → X4 → X2 → normal size

- When the recording is done in EP mode, the zoom function is not supported except when the recording has been in DVD-VIDEO and finalised DVD-R/-RW(V).